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ABSTRACT

This two-volume document contains the proceedings of the 2000 conference of the Academy of Human Resource Development (AHRD). Volume 1 contains the following materials: conference overview; text of a town forum on social responsibility and human resource development (HRD); papers from symposia 1-24; and papers from innovative sessions 1-4. The topics of the symposia and innovative sessions covered in Volume 1 are as follows: using technology for learning; linking HRD theory and practice; motivation for learning and performance; images of HRD; workplace issues; new perspectives in evaluation; meeting the informal learning challenges of free-agent learners; identity, influence, and politics; charting the future of HRD; assessing university programs; assessing the learning organization; organizational change; leadership development; training companies on HRD industry changes; knowledge and intellectual capital; workforce diversity; management development; improving HRD practice through research; transformative learning; instructional technology; Internet courses in HRD programs; increasing participation in learning; emotion and behavior in the

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workplace; action learning; increasing job satisfaction; designing effective HRD programs; organizational culture and climate; and confronting professional values and ethical issues. Volume 2 contains the following materials: materials from the poster sessions; papers from symposia 25-45; and papers from innovative sessions 5-7. The topics of the symposia and innovative sessions covered in Volume 2 are as follows: developing employee competence; self-directed and incidental learning; ethics and integrity; feedback systems; cross-cultural issues in HRD; organizational structure and strategy; HRD and metaphor; evaluation in HRD; core directions in HRD; work motivation; career development; HRD in Asia; knowledge management; workforce development; advances in distance learning; integrating learning with working; research methods in HRD; inquiring into dilemmas of implementing action learning; organizations in transition; HRD and employee outcomes; change and consultants; individual learning issues; theory building research in HRD; and emotional intelligence and sales success. A CD-ROM containing the proceedings and an AHRD membership directory is also included. (MN)

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Academy of Human Resource Development

AHRD

VOLUME I

2000 CONFERENCE PROCEEDINGS

MARCH 8–12, 2000
RALEIGH-DURHAM, NORTH CAROLINA

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Proceedings

2000 AHRD Conference

Raleigh-Durham, NC
March 8 – 12, 2000

Volume 1

K. Peter Kuchinke
Proceedings Editor

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From the Editor

Welcome to Raleigh-Durham and the 2000 Academy of Human Resource Conference! Our profession and the Academy are continuing to grow and the quality and quantity of the papers and presentations at this conference attest to this fact.

These proceedings contain over 140 papers written by 266 authors, among them 54 from outside the U.S. The Netherlands and the U.K. lead the group of international authors with 20 and 18 authors, respectively. Other countries represented at the conference include Russia, Ireland, Finland, Kenya, Australia, China, Korea, Singapore, Malaysia, and Taiwan, as well as contributions from international HRD students currently living in the U.S.

Also notable are the contributions by authors from outside the university sector. These include the World Bank, branches of the U.S. military, U.S. Fortune 500 organizations, as well as government, education, and consulting organizations.

Using the Proceedings

1. This year, again, the proceedings have been printed in two volumes. The papers in each volume follow the conference program.
2. The Table of Contents at the beginning of each volume covers both volumes. So do the author and keyword indices at the end of each volume.
3. A short program overview is included in both volumes, the full program is printed as a separate document.
4. As in previous years, papers are identified by symposium number, and this number is used for the Table of Contents and the indices.
5. The CD contains the entire proceedings document as well as the current Membership Directory.
6. The CD contains 'hotlinks' from the Table to Contents to individual papers. Just double-click on the paper number in the right hand margin to open an individual paper.

I hope that you will enjoy the conference and find value in the many presentations and other events at this conference.

K. Peter Kuchinke
University of Illinois at Urbana-Champaign
Proceedings Editor

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Call for Papers
AHRD Research Conference 2001

Tulsa, Oklahoma, USA
February 28, 2001 - March 3, 2001
Hosted by Oklahoma State University

The Academy of HRD, an international organization having the mission of encouraging the systematic study of human resource development theories, processes, and practices, encourages you to submit Manuscripts for the 2001 International Research Conference.

- All scholars interested in HRD are invited to submit manuscripts for consideration. The conference is attended by researchers and students from the areas of HRD, business, psychology, education, economics, sociology, technology, and communication. In addition, HRD researchers and reflective practitioners from business, industry, and government participate fully in the conference.
- Manuscripts may be submitted in three categories: Research and Theory Symposium, Innovative Session, and Poster. All Manuscripts will be blind reviewed and should be of new unpublished research. Papers accepted for the conference program will be published in the conference proceedings and may be published elsewhere following the conference.
- **Authors must submit full manuscripts**. Authors need to be aware that computers and projectors are not provided by the conference. Authors wishing to use computers and projectors must plan on providing them themselves

Manuscript Requirements

Research and Theory

Full manuscripts (up to 20 pages) are required. Submissions should be new and unpublished. Research papers, as appropriate to the methodology used, should minimally contain the following elements:

1. Title
2. Problem statement
2. Theoretical framework
3. Research questions or propositions
4. Methodology and/or research design with limitations
5. Results and findings
6. Conclusions and recommendations
7. How this research contributes to new knowledge in HRD

AHRD also welcomes manuscripts presenting new scholarly theory, models, conceptual analyses, literature reviews, and case studies. While these papers may not yet offer results (#5 above) and conclusions (#6 above), they must otherwise follow the above requirements as closely as possible.

Manuscript Requirements

Innovative Session

An innovative session is designed to present new and innovative HRD work through creative, interactive presentation formats that do not fit within the regular research and theory symposium process. Multiple papers will be considered, but one complete manuscript must be submitted for inclusion in the proceedings. **Full manuscripts (up to 20 pages) are required.** The following criteria MUST be addressed and met in the Manuscript:

1. Title
2. Content of session with evidence that it is new, is innovative addresses research or scholarship, and makes a substantive contribution to HRD knowledge..
3. Description of format and style of presentation that is to be innovative, intellectually stimulating, generative of a high level of scholarly dialogue, and participative by both presenters and audience.
4. A timetable for how the 90-minute sessions will be filled.

Manuscript Requirements

Posters

Posters are useful in presenting a theory or a model, though effective Manuscripts have also been presented to use a variety of sessions to view the field of HRD in different ways. Posters are not a substitute for a scholarly paper. Posters will remain up throughout the conference, and a session will be scheduled to allow interaction between the author(s) and conference participants. The following criteria MUST be addressed and met in the Manuscript:

1. Title
2. No more than two, professional appearing, 2' x 3' poster boards that must be readable from a distance of six feet. Reduced copies of the poster boards should be included with the Manuscript.
3. An accompanying description of the poster , including the reduced copies of the posters. **Full manuscripts (up to 14 pages including the poster miniatures) are required.**
4. Must be research-based.

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3. Blind review ready
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8. All final manuscripts not forwarded by Email must include a disk copy in MS Word 6.0 (or later) format.

Submission Deadlines

1. Manuscripts/Manuscripts:	**October 1, 2000**
2. Decision Notification:	**November 20, 2000**
3. Final Papers Due to proceedings editor:	**January 8, 2001**

Final papers are limited to 8 single-spaced pages except for posters, which is limited to four, in addition to the reduced copy or photograph of the posters.)

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Thursday, March 9	Time	Friday, March 10	Saturday, March 11	Sunday, March 12
Preconferences 12:00, Wednesday March 8, 2000 through 12:00, Thursday March 9, 2000	7:00 AM to 8:15 AM	Food-N-Thought Discussions (3), Join in! → HRDI Management Board Breakfast and Meeting *EXHIBITORS OPEN*	Food-N-Thought Discussions (3), Join in! → HRDI Editorial Board Breakfast and Meeting	Food-N-Thought Discussions (3), Join in! → AHRD Board Breakfast
➲ IFAL - Action Learning ➲ Performance in HRD ➲ Integrity in HRD ➲ Globalization in HRD ➲ Emerging Scholars and Leadership in "HRD"	8:30 AM to 10:00 AM	***--Keynote Presentation*** **Dr. Peter B. Vaill** **University of St. Thomas** **"Leading and Managing Change is All There Is."**	***--Keynote Presentation*** **Dr. John C. Boling** **SAS Institute, Inc.** **"Learning, Unlearning, Relearning"**	**SYMPOSIUM** 37 Workforce Development 38 Advances in Distance Learning 39 Integrating Learning and Working 40 Research Methods in HRD I6 Innovative Session - Action Learning J1 Publishing in HRD RF4 Research Forum 4
Conference Registration Opens	10:30 AM to 12:00	**SYMPOSIUM** 1 Using Technology for Learning 2 Linking HRD Theory and Practice 3 Motivation for Learning and Performance 4 Images of HRD 5 Assessing University Programs 6 New Perspectives in Evaluation I1 Innovative Session - Informal Learning	**SYMPOSIUM** 19 Increasing Participation in Learning 20 Emotion and Behavior in Workplace 21 Action Learning 22 Increasing Job Satisfaction 23 Designing Effective HRD Programs 24 Organizational Culture and Climate I4 Innovative Session - Values and Ethics P1 Poster Session	**SYMPOSIUM** 41 Organizations in Transition 42 HRD and Employee Outcomes 43 Change and the Consultant 44 Individual Learning Issues I7 Innovative Session - Theory Building
12:00-5:00 AHRD Board of Directors Meeting 2:00-5:00 Local Tours	12:00 to 1:30 PM	Food-N-Thought Discussions (3) - Join in!	Food-N-Thought Discussions (3) - Join in! → Joint AHRD Board and ASTD Research Committee Meeting and Lunch → Advances Editorial Board Meeting and Lunch	AHRD Business Meeting for all Academy members
3:00pm Academic Showcase hosted by North Carolina State University 5:00pm Student Reception 6:00pm Grand Reception & Conference Overview **7:00pm HRD Town Forum** **Social Responsibility of HRD How Our Definitions and Worldviews Impact Our Leadership Role** Ann K. Brooks Timothy G. Hatcher	1:30 PM to 3:00 PM	**SYMPOSIUM** 7 Identity, Influence and Politics 8 Charting the Future of HRD 9 Workplace Issues 10 Assessing the Learning Organization 11 Organizational Change 12 Leadership Development I2 Innovative Session - Knowledge Working Paradigm S1 Special Session - Asian Chapter	**SYMPOSIUM** 25 Developing Employee Competence 26 Self-Directed and Incidental Learning 27 Ethics and Integrity 28 Feedback Systems 29 Cross-Cultural issues in HRD 30 Organizational Structure and Strategy I5 Innovative Session - HRD and Metaphor RF2 Research Forum 2	Lunch and hotel checkout
	3:30 PM to 5:00 PM	SYMPOSIUM 13 Knowledge and Intellectual Capital 14 Workforce Diversity 15 Management Development 16 Improving HRD Practice Through Research 17 Transformative Learning 18 Instructional Technology I3 Innovative Session - Use of Internet in HRD RF1 Research Forum 1	**SYMPOSIUM** 31 Evaluation in HRD 32 Core Directions in HRD 33 Work Motivation 34 Career Development 35 HRD in Asia 36 Knowledge Management S2 Special Session - Publication Reviewers RF3 Research Forum 3	
9:00pm HRDI Editorial Team Meeting	Evening Events	**FREE EVENING** 6:00pm HRDQ Editorial Board Meeting and Dinner 6:00pm Global 100 Meeting and Dinner	6:00-9:00pm President's Dinner & Awards Banquet for all conference attendees (included in registration)	

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Social Responsibility of Human Resource Development: How Our Definitions and Worldviews Impact Our Leadership Role

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Whether or not HRD should assume a leadership role in social responsibility has not been seriously or rigorously addressed in related literature or in professional dialogue. Examining the issue of social responsibility and HRD as a profession and occupation demands that we examine the assumptions underlying our fields' particular use of the disciplines of economics and psychology and to explore more socially responsible alternatives. In addition, this dialogue includes a critical and unorthodox look at how we define our field, how we define social responsibility, and how we view the world.

Keywords: Social Responsibility, Professional Responsibility, Professional Ethics

A profession is differentiated from a collection of skills or an occupation by certain shared characteristics. These characteristics include extensive intellectual knowledge and the provision of products and/or "services which are important to the organized functioning of society" (Callahan, 1988, p. 26). Human resource development has recognized, albeit unendorsed, collections of competencies that identify extensive intellectual knowledge. What the discipline of HRD has yet to acknowledge and resolve is its fundamental responsibility to society.

The way we view reality colors the way we see and understand the field of HRD and the breadth and depth of our leadership in social responsibility. Discussions are needed to critically assess certain taken-for-granted worldviews in which HRD is embedded, and thereby enhance the likelihood that as a profession we will act consciously on issues of social responsibility. Although as a multidisciplinary field, HRD draws on many disciplines, economics and psychology have been particularly influential. Thus, the purpose of this paper is to critically examine the assumptions underlying our field's particular use of the disciplines of economics and psychology and to explore more socially responsible alternatives.

Defining Social Responsibility

Being socially responsible as HRD professionals has two possible meanings. The first, a rational economic one, says that we have no moral responsibility beyond helping our own organization increase profits. Because rational economics is presumed to be morally neutral and human beings to be either amoral or immoral without outside control, morality is enforced through laws, contracts, and rules. The second meaning says that we do have a moral responsibility to address the needs and problems of the larger communities as well as those of our own organization. Morality issues from an understanding of the interconnectedness of all entities in the world and beyond. The first meaning, a rational economic one, implies that organizations are bounded entities dedicated to increasing profits through interactions with other bounded entities in society. The second is more fluid and suggests that the realities we construct and the boundaries we set are artificial, and we cannot profit if others do not profit, as well.

To be socially responsible within the rational economic worldview requires that we either justify what appears to be a moral action taken beyond the bounds of our own organization as "good for business," or take the radical step of going beyond the walls of our organizations to include stakeholders with no direct link to what we do. The first is reflected in the tax deductions allowed both organizations and individuals for philanthropic contributions and the current appearance of philanthropic foundations sponsored by high technology companies such as Microsoft and Dell in order to improve their corporate image. Similarly, we regularly see advertisements by oil and tobacco companies showing us how the "care" for either the environment or our children. One way HRD professionals have acted with concern for the bottom line and in a socially responsible manner has been to contribute to education improvement and recruitment of diverse groups. However, many of the community issues that require attention are

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not directly linked to a company's bottom line. Devoting time and resources to them as HRD professionals within an organization cannot be justified in terms of rational economics. For example, companies have been little concerned with the Earth's atmosphere, and little rational justification related to the bottom line exists for HRD professionals to address that issue. We have little wonder that social responsibility for organizations and HRD professionals currently seems to be either calculated or cynical or a fringe preoccupation.

The second meaning of social responsibility suggests that a profession such as HRD does have a responsibility to communities beyond its employing organization's boundaries. It implies that organizations and professional groups are social institutions and have a social contract with society. Social responsibility under this precept suggests that HRD has "a moral obligation to use their resources for the common good as well as obligations to particular groups such as stakeholders, consumers, employers, clients, and creditors" (Tomer, 1994, p. 128). In this worldview, we construct reality with each action we take, all living and non-living entities are interconnected and interdependent, rationality is holistic and nonlinear, and each of us (like organizations and communities) are defined by our relationships. Morality issues from recognition of our fundamental interdependence.

Defining HRD in economic and psychological terms

As a multidisciplinary field, HRD is influenced not only by societal needs, but also by several underlying disciplines; namely, economics, psychology, general systems, ethics, and sociology, among others. Arguably, most of the organizations in which HRD professionals work are economically-driven, meaning that HRD itself is infused with the economic/capitalist ethos of what Peter Drucker calls a post-capitalist society (Drucker, 1993). Historically, the discipline of psychology has been capitalism's handmaiden in developing ever-better ways to adapt employees to this economic/capitalist worldview.

Economics

Even with the ubiquitous nature of economics, HRD researchers and practitioners have not embraced it as a basis for research and practice in ways that would benefit organizations and the HRD field (Passmore, 1997). Few scholars or practitioners, if any, have made any attempt to study the relationship between economic theory and HRD research and practice or to apply economic theory to research and practice. The taken-for-granted economic belief system of HRD professionals is that the purpose of HRD interventions is to provide financial benefit to the organization, people are economic capital, and organizations are economic entities (Swanson, 1999). This economic ideology is consistent with *neoclassical* economics or free-market capitalism.

Neoclassical economics explains the free-market capitalist system and suggests that "starting from zero consumption, people will strive to consume goods and services without limit (Burk, 1994, p. 315). However, in a finite system there are always limits. Scarce resource economic theory implies that "decision makers choose between options based on their forecasted return on investment (Swanson, 1999, p. 13). The problem is that most decision makers in organizations today do not understand or acknowledge that organizations are "not only engines of economic growth but also pivotal agents of social and political integration" (Tichy, McGill & St. Clair, 1997, p. 28). Thus, decisions are made using myopic economic models that wreak havoc on the environment and have been linked to violence in the workplace. The brilliant economist E.F. Schumacher said that the modern economic system was a "path to resource depletion, environmental degradation, worker alienation, and violence (Schumacher, 1979).

The current discontent with privileging economics over human and social issues is exposing the weaknesses of neoclassical economic theory as well as limitations of a rational scientific worldview. Both the ideology of capitalism and the culture of consumerism need to be fundamentally reassessed (Welford, 1995; Hatcher, 1999). Based on exploitation of valuable and non-renewable resources and characterized by individualism rather than collectivism orthodox, short-term and linear economic models fall short when addressing systemic societal and global environmental dilemmas. "Long-term results cannot be achieved by piling short-term results on short-term results (Drucker, 1993, p.80).

Traditional capitalist economies are mechanistic, static, and atomistic and view technical growth as the way to make our resources endlessly sustainable. The ability of the environment to continue to support life is increasingly undermined by the same neoclassical economic approaches subscribed to (consciously or unconsciously) by most HRD professionals. The obstacles preventing sustainability, i.e., depletion of natural resources, increasing population, workplace violence, and environmental degradation, show little sign of diminishing. The awareness of the planetary life support system's deterioration is forcing the realization that decisions made on the basis of short-term economic criteria can have far-reaching and disastrous results. The challenge is to strengthen the interdependence between economic development and environmental and social sustainability by creating a profession that actively addresses the obstacles preventing sustainability. HRD has the opportunity to become such a profession.

Psychology

The field of psychology has provided the basis for much of the HRD field. Behavioral psychology spawned competency based training and behavioral and performance objectives, psychologist Kurt Lewin's input/output model of organizational change and psychoanalytic and Gestalt theories dominated organizational development, and developmental psychology provided a foundation for career development.

However, psychology itself does not provide a sparkling model of social responsibility. It has a history of strong commitment to the tenets of scientific rationalism and is only now reassessing the serious limitations of its historical alliances, alliances that were themselves established in order to gain legitimacy as a scientific field and secure prestige and funding for research. The result of selling itself to the highest bidder has meant that the field has used its skills to further the interests of society's dominant groups and often failed to act on behalf of those who are oppressed. Clinical psychology pathologized those who fail to conform. Organizational psychology medicalized dysfunctional organizations and learning psychology problematized recalcitrant learners. Developmental psychology took male Harvard undergraduates as the norm and categorized those who were different as less developed.

Much of this history has been blindly incorporated into HRD practice in the name of increased efficiency, management development, job skill inventories, competency-based training, career ladders, motivational tools, performance appraisals, organizational diagnosis, and even team-building and some kinds of action research. In fact, even when we step outside our organizations and look back, we still focus on our own well-being and ask questions such as "Is revenue up or down, how are products/services being improved, and how do customers feel about the company" (Weisbord, 1987, p. 7).

Emerging psychological theory begins to erase the boundaries between the social science disciplines. It emphasizes the inseparable nature of individual and society (Bruner, 1996; Gergen, 1994), the ways in which we use narrative to construct our realities (Bruner, 1985), the ways in which we define ourselves by our relationships (Mitchell, 1988), the co-construction of ourselves and our understandings of reality (Gergen, 1994; Brooks & Edwards, 1997), and the increasingly complex cognitive demands our environment places on us (Kegan, 1994). All of these theories support an increasingly systemic view of our world and us. They ask that we take responsibility for the world beyond our organization, and recognize that with each interaction we have and each action we take, we are co-constructing a new organization. They require us to take a perspective and develop the ability to enact our professional skills in a way that is non-linear and non-reductionistic. Does competency-based training develop people who can understand their interdependence with others? Does diagnosing organizations encourage us to focus on our interrelatedness with our environment or the project of self-perfection? Does a career ladder allow us to think about employment as a social issue or as job posting and succession planning within our organization? With a new understanding of interrelatedness and existential choice, psychology has engaged the possibility of diminishing the isolation of individuals within Western society and establishing a basis for responsible social action.

With psychology's leap forward, HRD can interact with a discipline that provides theoretical clarity for carrying out an everyday practice that is socially responsible. HRD not only can, but also should lead organizations to an ever-deeper understanding that social responsibility is no longer a financial burden, but a necessity for survival.

Impact of Worldviews on HRD

Taking for granted the rational scientific assumptions of rational economics and a traditional psychology has made the lens through which HRD sees both reductionistic and predictable in a variable and limitless world. The importance of viewing HRD diverse worldviews including logical positivism, critical theory, hermeneutics, and systems thinking or deep ecology, for example (Capra, 1996), requires further discussion. The discussion of at least two of these worldviews, logical positivism and systems theory, should help justify HRD's role as a leader in social responsibility.

Logical Positivism

Logical positivism is a philosophy with an "extremely positive evaluation of scientific methodologies (Lincoln & Guba, 1985). As a worldview for a profession such as HRD, it limits our approach to individuals, organizations, and even societies to one of control, efficiency, rule-based predictability, two-dimensional thinking, anthropocentric-orientation, and cause-effect relationships. Capra (1996) writes that logical positivism is an "outdated worldview, a perception of reality inadequate for dealing with our overpopulated, globally connected world"(p.4). Although positivism is arguably the dominant worldview of business and industry today, Lincoln & Guba (1985) describe it as a worldview that is "passe…and is the product of small, confused minds who retreat to it because they lack any other viable alternatives" (p. 24).

Positivism has two consequences: determinism and reductionism. Both are negative to professions like HRD and unfounded as a viable way of seeing today's world. Determinism negates human free will to change social mores and networks or establish new social interconnections. Reductionism makes all phenomena, including social responsibility, subject to a single set of laws (Lincoln & Guba, 1985).

Logical positivism has an important impact on HRD's role in social responsibility. First, when we choose to view our reality as deterministic, we negate our ability to regenerate and legitimate our profession and our society. When we believe that there is a single tangible reality that can be reduced to a series of parts to be studied independently, and that the whole is simply the sum of those parts, we are unable to grasp the utter simplicity that our profession is part of society. Similarly, when we are unable or unwilling to accept our part in the web of life, we are sentencing our profession to second-class status as the slave of a paternalistic and contemptuous economic/management system. A system that is dedicated to profit at any cost is blind to the disastrous affects that uncontrolled capitalism is having on our social and ecosystems and ultimately, the capitalist organization itself (Fox, 1994; Capra, 1996; Hatcher, 1999).

Systems Theories

Unlike logical positivism, a worldviews that HRD professionals may not be as familiar with, but that allow us to change our frame of reference (Kuhn, 1962) are *systems theories*. General systems theory, for example, is defined as "an important means of controlling and investigating the transfer of principles from one field to another" (Bertalanffy, 1968, p.84). Many systems theorists suggested that organizations and societies are complex, three dimensional, cosmological, open systems with interdependent subsystems working together to achieve the goal of the whole system (Capra, 1996; Wimbiscus, 1995). Yet, compared to rational economics, general systems theory is a relatively modest body of knowledge (Swanson, 1999).

Recent concerns with the relationship between organizations and environmental degradation have illuminated the relevance of related and contemporary systems theories such as *autopoiesis* or self-regulating systems (Maturana & Varela, 1980), *deep ecology* (Capra, 1996), and the *Gaia* hypothesis (Lovelock, 1979, 1988). We will discuss each systems theory briefly.

Autopoiesis, also known as self-regulating or self-producing systems, is concerned with two hypothesis: first, all living systems are organized in a closed circular process, and second, all living systems are cognitive systems, and living is a cognitive process (Maturana & Varela, 1980). Behavior in the physical domain is governed by physical laws while behavior in a social system is governed by norms and rules which can be broken (Capra, 1996). Luhmann (1990) developed the concept of social autopoiesis as a process or network of communication. Since social systems are language-bound, i.e., symbolic, they are self-produced by non-physical boundaries of expectations, loyalty, confidentiality, and so on (Capra, 1996). This system's worldview implies that organizations and societies are living systems and as part of the physical world are self-regulating and thus capable of continual change while preserving a pattern of organization.

Capra's concept of *deep ecology* is a broad-based, holistic worldview: a way of seeing the world as an integrated whole rather than a detached collection of parts. "Deep ecological awareness recognizes the fundamental interdependence of all phenomena and the fact that, as individuals and societies, we are all embedded in (and ultimately dependent on) the cyclical processes of nature" (Capra, 1996, p.6). Thus, humans, communities, organizations, and societies are simply strands in a "web of life" (Capra, 1996, p.7).

Perhaps the most comprehensive and enchanted example of systems theory is *Gaia*, the notion that the planet Earth is a living system. Gaia is an ancient and organic, *Mother-Earth* metaphor, "drawn from the process of life"; mechanistic thinking depends on metaphors drawn from man-made machines (Sheldrake, 1991, p.13). Gaia as a mother earth metaphor is evidenced in cultures worldwide. Mother Earth was accepted as a sacred belief until the Protestant Reformation in the sixteenth century when humanity's fear of wild, untamed nature reinforced its desire to subdue Mother Nature. A world view where nature was no longer acknowledged as Mother or sacred, and no longer considered alive, finally evolved out of the desacralized scientific and industrial revolutions. Shifting focus from ecosystems to the planet as a whole, Gaia is a system of three layers (metaphorically): (a) Earth's biosphere, a thin layer of living things; (b) the inanimate Earth itself, and (c) a protective layer of atmosphere surrounding the biosphere. Gaia is considered autopoietic, i.e., it is self-bounded, self-generating, and self-perpetuating (Capra, 1996).

Systems theories have evolved from a mechanistic general systems theory to the organismic philosophy of Gaia. Mechanistic science rejects the idea that Gaia is alive, yet "morphogenesis, instinctive behavior, learning, and memory are still among the unsolved problems of biology, and the nature of life itself remains an open question" (Sheldrake, 1991, p.157). Unlike scientific systems thinking, Gaia reflects the fact that humankind's actions cannot be separated from the Earth, and like the Great Mother of ancient mythology, that Earth has a reciprocal aspect that cannot be ignored.

Our worldviews must begin to reflect contemporary needs for explanations that are applied, holistic, social, and ecologically benevolent. Wheatley (1994) suggested that "if nature uses certain principles to create her infinite diversity, it is highly probable that those principles apply to human organizations" (p. 143). Modifying theories and our worldviews without concurrent shifts in practice seals the fate of HRD as a second-rate discipline and most certainly obscures its role in enhancing corporate social responsibility. Continuously reviewing, revising, and utilizing economic and psychological theories and diverse worldviews that affect the ability of HRD to play a decisive role in building a sustainable future is both judicious and moral. Human resource development as a field of study and a profession should always reflect only those theories and worldviews that can truly enhance its ability to create a better world for individuals, organizations, and society.

Summary and Conclusions

Organizations significantly and continually influence humanity and acquire dominance over ecosystems. The way organizations view their contributions to society and the planet must be fundamentally changed to cultivate a chance for a sustainable future. "Organizations have to take social responsibility. There is no one else around in the society of organizations to take care of society itself. Yet they must do so responsibly, within the limits of their competence, and without endangering their performance capacity" (Drucker, 1993, p.97).

Human resource development as an organizational function and as a stand-alone profession plays a principle role in enhancing the long-term sustainability of organizations and has the potential to help cultivate organizations and people that positively influence communities, society, and the environment. The influence that economic and psychological theory have had on HRD and the worldviews that have influenced HRD require review and re-definition so that we might clarify and better understand our potential contributions and responsibility to society.

Today, society must be served through organizations. As organizations become more influential they become either instruments of destruction of the environment and society or tools for sustainability of communities, the ecology, and humanity. As an integral part of today's organizations, human resource development has an economic responsibility to the organizations who employ its professionals and methods and the HRD profession has a moral responsibility to individuals, organizations, and societies it influences. But, as discussed herein, HRD also has a responsibility to create a profession that is responsible beyond shortsighted economic gain. Rational economic and traditional psychological theory and obsolete worldviews are faithful to short-term returns and disjointed approaches to sustained change. Such theories hamper socially responsive organizational and societal changes. "There could be no greater folly than to manage the economy as though its sole relationship to earth is that of exploiter – as though the earth could be viewed as a fund of resources and a dumping ground for that which no longer serves us" (Harman & Porter, 1997, p133).

Shifts in the way we view our world (reality) are catalysts for progress toward sustainable development of the environment and humanity. Applied disciplines such as HRD must systematically review its assumptions about the world to ensure their validity and worth.

Human resource development professionals and academics who respond to the challenge of social responsibility will prove in the long run most successful not because it is simply the right thing to do but because "..... if we take care of the societal bottom line, the conventional bottom line will probably take care of itself. When an organization adds value to external clients and society, it will also likely add value to itself and its shareholders" (Kaufman, 1997, p. 3). Finally and ultimately, not to do so guarantees the eventual destruction of the Earth.

One final thought on the HRD profession assuming a leadership role in social responsibility. As implied earlier in this paper, some HRD professionals believe that just because we ought to do something does not mean we can do it. We must logically be able to perform an action. We all want to rid our society of poverty and crime and heal the environment, but given limited resources and abilities, we are not obligated to perform actions beyond our physical or mental abilities. Thus, we choose to delegate our responsibility to a "third party" such as the government or social institutions. This is a logical positivistic argument that results in limited and obviously questionable outcomes. It also assumes that we have no social responsibility because we are not morally culpable and social problems are not moral problems. There are several inconsistencies with this approach to social responsibility.

First, in the case of moral responsibility, "no delegation occurs because no person is excluded from the relationship" (French, 1988, p. 266). Using systems thinking previously discussed we are morally responsible because we are moral entities and are interconnected. The next inconsistency is that the act of delegation implies intention to be responsible. As collections of individuals with particular physical and mental properties, professions can be morally and thus socially responsible. This ascribes a certain level of singular intent that many would not ascribe to collective entities. However, we believe that, as a profession we have a collective conscience that manifests itself within the skills, knowledge, abilities, attitudes, culture, experiences, and spirit of the individuals who collectively make up the profession of human resource development. This conscience provides the catalyst for leadership in social responsibility.

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Openness to Technology in Virtual Teams: Implications for International Human Resource Development

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This study examines three levels of analysis--national culture, group identity, and individual--in the prediction of attitudes about and use of technology in global virtual teams. Using data from 520 subjects in six countries, we present validation results of an openness to technology scale, and examine a multi-level model of attitudes about technology. We find different predictors for individualist versus collectivist cultures, and we discuss implications for managing global virtual teams.

Keywords: Virtual Teams, International HRD, Technology

Fueled by a simultaneous explosion in new media technology to support cross-national communication and human resource development interventions, global corporate internet and intranet communications are commonplace (ACM, 1996; Hoffman, Kalsabeek, and Novak, 1996). Geographically dispersed virtual teams operate in most major multi-national corporate settings. Yet little is known about the cross-cultural communication differences among team members with different national culture backgrounds (Watson, Miguel, Aycan, and Jaeger, 1998; Gomez-Mejia and Palich, 1997). The purpose of our research is to validate an instrument designed to examine cultural differences in communication norms when virtual team members communicate via internet technology.

We begin by presenting a conceptual framework that links cross-cultural differences with communication theory. We then present the validation results of confirmatory factor analysis on an openness to technology scale developed earlier (Watson et. al, 1998). Next we turn to discussion of findings about attitudes about technology of more than 500 subjects in six nations. Then we explore the cultural generalizability of predictors related to our instrument. Finally, we discuss the implications of our results for human resource development in corporations using internet technology for global employee communication.

Theoretical Framework

Classic communication theory has a long history of examining how the communication medium impacts the way signals are sent, transmitted, and received. In recent years, a large body of empirical studies housed in the information systems literature has examined how communicating via electronic media impacts communication behavior (e.g., Jackson, Chow, and Leitch, 1997; Ferguson and Nevell, 1996). The channels studied range from the relatively simple and widely available electronic mail, through more complex and expensive media like simultaneous satellite live videoconferencing. In general, the array of contemporary electronic technology available is referred to as new media.

The process by which adoption of technology occurs has been studied at the industry, firm, group, and individual levels. We blend an institutional theory perspective (DiMaggio and Powell, 1983) with a social psychological attitudinal change perspective (Fishbein and Ajzen, 1975) and suggest that isomorphic effects occur that lead to the diffusion of perceived acceptability of technology across levels. Further, positive individual experiences with technology will lead to increased acceptance of technology. Thus, increased diffusion across both the macro and micro levels occur simultaneously.

The conceptual framework we examine is depicted in Figure 1. This model brings together concepts from multiple levels of analysis – the national culture level, the organization level, and the individual level.

Cultural Dimensions. In high uncertainty avoidance cultures, things that are unknown or different are perceived as dangerous, and innovation is resisted (Hofstede, 1991). In these cultures, uncertainty leads to stress and anxiety, and ambiguous situations are to be avoided. Conversely, those in low uncertainty avoidance cultures perceive new and different things as curious, and uncertainty is accepted.

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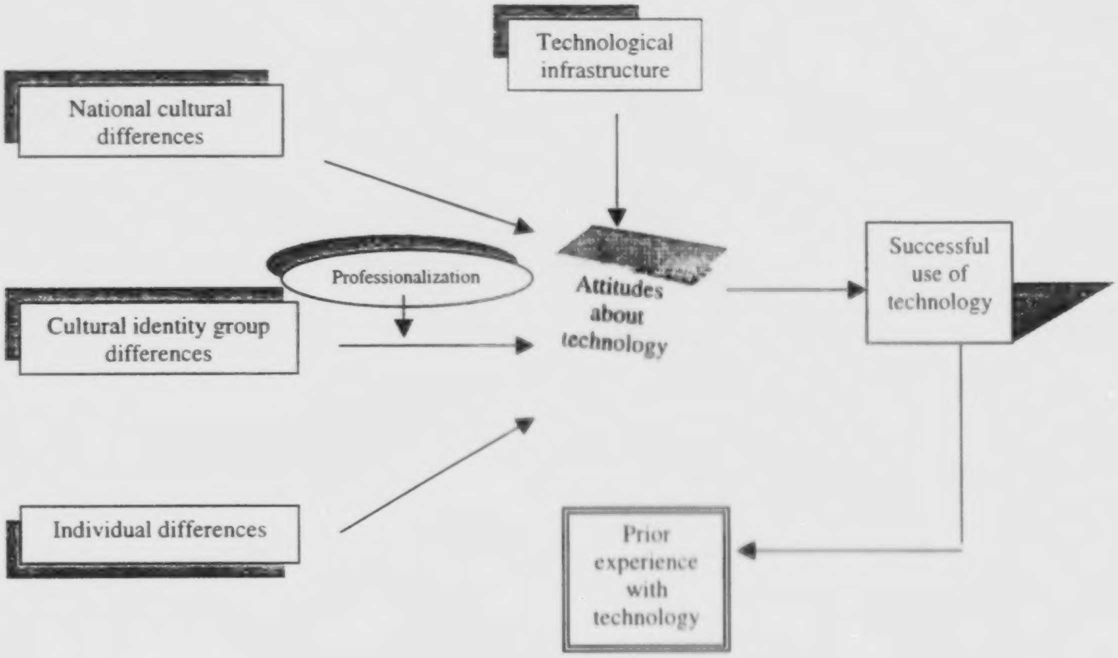
Hofstede (1980) and Gudykunst (1995) suggest that effective interpersonal and inter-group communication is a function of the amount of anxiety and uncertainty individuals experience when communicating with others. Gudykunst (1995) found that the ways individuals gather information to manage and reduce uncertainty differs in individualist and collectivist cultures. Members of individualist cultures seek out person-based information to reduce uncertainty about strangers, while people from collectivist cultures look for group-based information. When communicating with strangers, members of individualist cultures search for personal similarities while members of collectivist cultures are more likely to search for group similarities.

Figure 1: Multi-level Model of Predictors of Attitudes about Technology


Technological infrastructure
National cultural differences
Professionalization
Attitudes about technology
Successful use of technology
Cultural identity group differences
Individual differences
Prior experience with technology

According to Hall (1976), members of collectivist cultures emphasize the importance of context to explain others' behavior. Under uncertain situations, adapting and accommodating to the context is more important for members of collectivist cultures than to those of individualist cultures to manage the uncertainty. Using new media technology to communicate with people around the world brings more uncertainty to members of collectivist cultures since it is difficult to build groups and to access the physical communication context of others. With respect to the use of new technology, this leads us to the following hypotheses:

Hypothesis 1a: *Those in low uncertainty avoidance cultures will be more open to the use of technology than those in high uncertainty avoidance cultures.*

Hypothesis 1b: Those in individualist cultures will be more open to the use of technology than those in collectivist cultures.

Group/Organization Level Characteristics. Cultural identity groups are based on a wide variety of group-level characteristics: organization identity, cultural identification, professional norms, etc. Research on organizational culture (Schein, 1975), for example, finds that organizations vary from strong to weak cultures, and individuals within organizations tend to identify with organizational norms and with one another.

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Yet there is debate about the homogeneity of organization members' attitudes. Joanne Martin's (1992) work divides culture into three perspectives: integration, differentiation, and fragmentation. Depending on the perspective taken, individuals in organizations are both similar in attitudes as well as different. The integration perspective, embraced implicitly by the person-organization fit literature (O'Reilly, Chatman, and Caldwell, 1991), suggests that consistency holds together organization members. The differentiation perspective allows for inconsistency across organizations, with subculture similarities (e.g., VanMaanen and Barley, 1985). Finally, the fragmentation perspective embraces a loosely coupled web of fluid and multiple meanings, with fluid identities adapting continuously as needs change (a perspective embraced by Weick, 1976).

Nonetheless, there is evidence that group identity differences do exist, and that across formal organizations attitudes are likely to be different. These cross organization differences are likely to be moderated by norms of subgroups, like professional norms. This leads to the following hypothesis about groups and new media technology:

> *Hypothesis 2: Across organizations, attitudes about technology will differ, and the extent to which they differ will vary depending on the strength of professionalism moderating the organizational differences.*

Individual Differences. Individuals differ in both surface-level and deep-level dimensions (Harrison, Price, and Bell, 1998). Research on relational demography has investigated how surface level characteristics, like race and ethnicity, impact individual behavior (e.g., O'Reilly et. al, 1991). Deep level differences, like attitudes and values, have also been widely investigated. Attitudes and values have been linked to prior experiences with phenomena.

One key demography characteristic extensively investigated in the technology adoption literature is gender. Numerous empirical studies have examined the relationship between gender and attitudes about technology. In general, men have been found to be less anxious about technology and more likely to use it (e.g., Gefen and Straub, 1997; Gattiker and Hlavka, 1992). This leads to the following hypothesis about gender and new media:

> *Hypothesis 3: Men, as compared to women, will hold more positive attitudes about technology.*

As with all multi-level phenomena, cross level interactions will exist across levels. We posit that all predictors may not be uniformly relevant across cultural settings. This leads to the following hypothesis:

> *Hypothesis 4: There will be an interaction effect between national cultural and group and individual dimensions, reflected by differing predictors of attitudes about technology depending on cultural type.*

Methodology

Research Participants. The findings presented here are based on two sets of data collected from an internet-based discussion forum that linked more than 500 undergraduate and graduate students at seven universities in six countries (Canada, Israel, Turkey, Thailand, United States, The Netherlands). Participants took part in the internet based project as part of their course requirements.

First, the research team developed an instrument to measure attitudes about using computer technology (Watson et. al, 1998). Next, we collected data from 520 participants working in geographically dispersed virtual teams. We measured their attitudes about technology before and after a seven-week project (change in attitude data not shown here) in which they were required to participate in global teams. The results from our analyses support the validity of our technology attitudes instrument. Furthermore, they provide insight into how the cross-cultural differences of geographically dispersed team members impact their attitudes and satisfaction with internet technology.

Openness to Technology Scale. We validated a 40-item scale developed by Watson and colleagues (1998), designed to capture cognitive (e.g., I know what a LAN is), affective (e.g., Getting error messages makes me anxious), and behavioral components (e.g., I word process regularly). Cronbach's alpha for the 40-item scale was a very acceptable .86 overall.

As part of a prior research project, exploratory factor analysis was conducted using principal components extraction. Three factors emerged in our analyses: comfort with computers, technical knowledge about computers, and perceived value of computers (variance explained = 41.35%). All the sub-scales demonstrated high internal validity (Cronbach's alpha ranged from .65 to .93). Sample items from each factor appear in Table 1.

We validated this scale through confirmatory factor analysis on a separate data collection of 320 virtual team participants. Both sets of analyses support the validity of the openness to technology scale, specifically the replication of the three factors (comfort/experience, knowledge, and perceived value).

Table 1. Sample Items and Factor Loading for Three Factors

Factor 1: Comfort/Experience	Factor 2: Computer Knowledge	Factor 3: Perceived Value of Computers
Computers make me uncomfortable because I don't understand them (-.687) I'm good at finding information on the Internet (.672) I enjoy using computers (.740) Being expected to do new things with computers makes me anxious (-.435) I use the Internet regularly (.652) I enjoy working with machines of all kinds (.541) Computers make learning fun (.545) I use word processing regularly (.524)	I regularly read computer magazines or other sources that describe new technology (.593) I know how to replace a hard drive on a PC (.625) I know how to write a computer program (.617) I know what a LAN is (.497) I know what LEOS means (.614)	Being able to use computer at work would significantly increase my job satisfaction (.444) Access to information technology growth improves one's quality of life (.550) Learning to use cross cultural forum will make it easier for me to get a job (.649) I believe one can develop friendship via email (.477) Learning to use the cross cultural forum will enhance my education (.580)

Note: Factor loadings appear in parentheses.

Results and Findings

Hypothesis 1a suggested that those in low uncertainty avoidance cultures would hold more positive attitudes about computers than those in high uncertainty avoidance cultures. In the first study, we grouped our respondents based on uncertainty avoidance scores reported by Hofstede (1991). Consistent with our hypothesis, respondents from the low uncertainty avoidance (Canada/US) group reported more openness to technology in both the pre- ($p<.001$) and post-tests ($p<.002$) than respondents from the high uncertainty avoidance (Turkey/Israel) group.

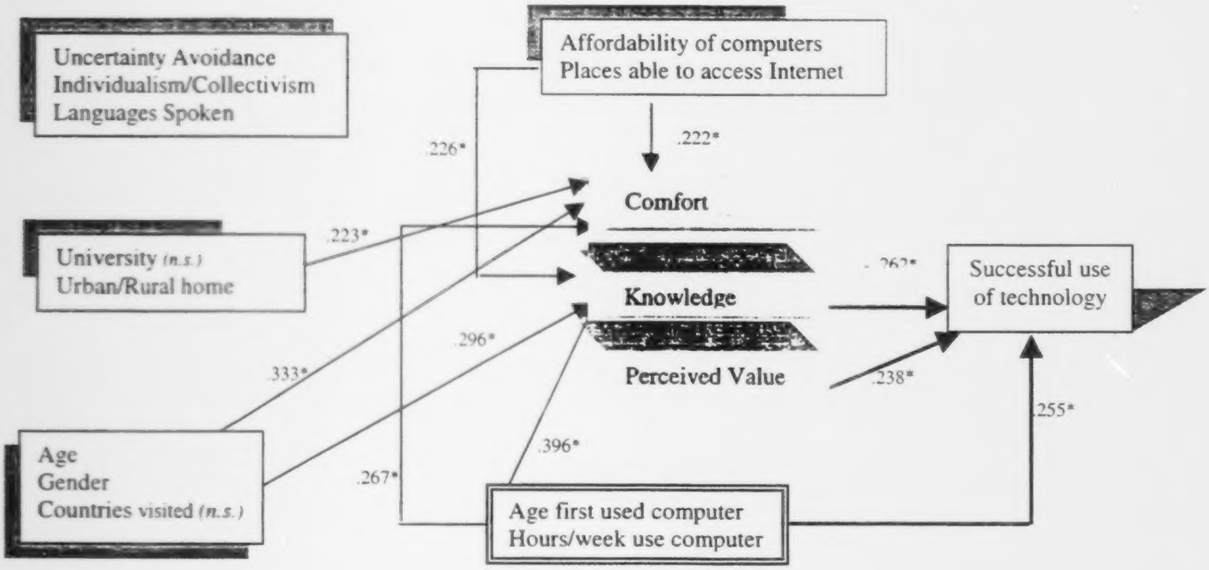
Hypothesis 1b suggested that those from individualist cultures would be more open to technology use than those from collectivist cultures. In the second study, we grouped respondents based on individualism and collectivism scores reported by Hofstede (1991). Consistent with our hypothesis, those from individualist cultures (US/Canada/Netherlands) reported more openness to technology than did those from collectivist cultures (Thailand/Turkey).

Hypothesis 2 posited that across organizations, attitudes about computers would likely differ, but that those differences would be greater or lesser depending on the strength of professionalism. We ran analyses comparing the six universities on all technology subscales and detected no significant differences. We concluded that professional norms among universities were stronger than university identity differences, leading to a non-significant effect.

Hypothesis 3 suggested that men would have more positive attitudes about technology than women. Consistent with this proposition, we found that men reported more comfort with computers ($p<.01$) and more technical knowledge ($p<.002$) than women. Overall technology scale scores were also significantly higher for men than for women.

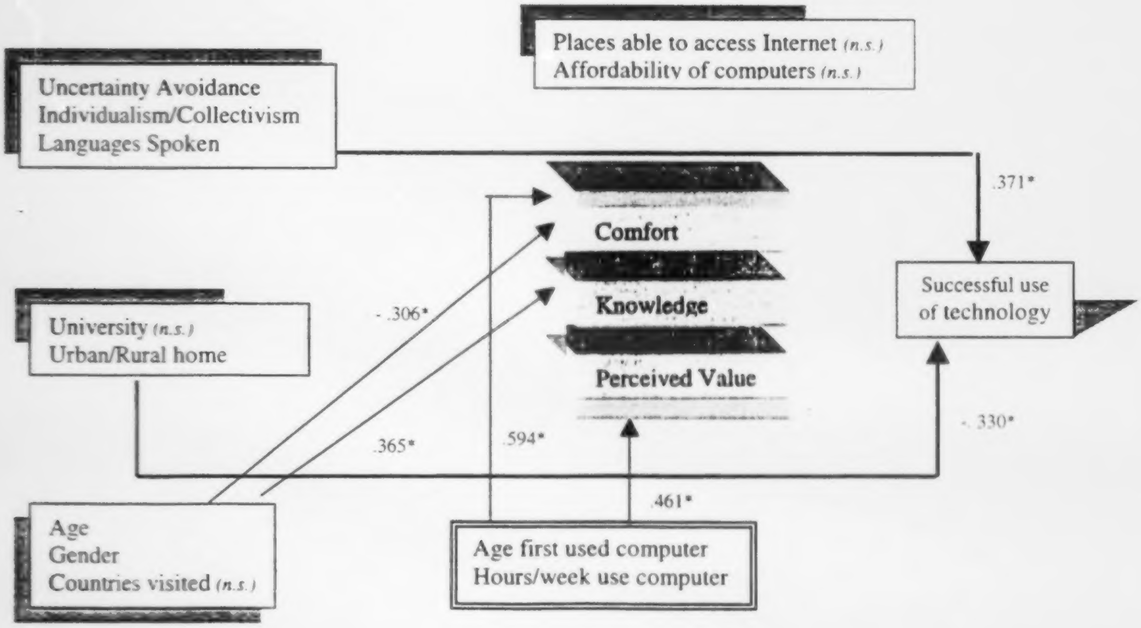
Hypothesis 4 posited that there would be different predictors across cultures for the successful use of technology. A Chow test on the differences between individualist and collectivist cultures resulted in significant scores ($F=2.3$ and $p<.05$). Figure 2 and Figure 3 depict the different predictors for individualist and collectivist cultures respectively.

Figure 2: Predictors in Individualist Cultures


Uncertainty Avoidance
Individualism/Collectivism
Languages Spoken
Affordability of computers
Places able to access Internet
.222*
.226*
Comfort
University (n.s.)
Urban/Rural home
.223*
Knowledge
-.262*
Successful use of technology
.296*
Perceived Value
.333*
.238*
.255*
Age
Gender
Countries visited (n.s.)
.396*
.267*
Age first used computer
Hours/week use computer

*Note: Significant predictors are shown in lines and coefficients. *p<.05*

Figure 3: Predictors in Collectivist Cultures


Places able to access Internet (n.s.)
Affordability of computers (n.s.)
Uncertainty Avoidance
Individualism/Collectivism
Languages Spoken
.371*
Comfort
Knowledge
Perceived Value
Successful use of technology
University (n.s.)
Urban/Rural home
-.306*
.365*
.594*
-.330*
.461*
Age
Gender
Countries visited (n.s.)
Age first used computer
Hours/week use computer

*Note: Significant predictors are shown in lines and coefficients. *p<.05*

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Discussion

In the present study, we sought conceptual understanding and empirical testing of the multi-level model of predictors of attitudes about technology across cultures. We used our data in the aggregate to validate our attitudes about technology scale. Our results support all our hypotheses at the culture level (significant findings for uncertainty avoidance and individualism), group level (non-significant findings for university), and individual level (significant findings for age and gender).

We also posited that predictors for our model of attitudes and behavior would differ based on meta-culture type (e.g., Hofstede's individualism dimension), following existing theory in cross-cultural communication style differences (Hall, 1976; Hofstede, 1991). Consistent with our predictions, the results indicated that there are different predictors for attitudes about technology between individualist and collectivist cultures (see Figures 2 and 3). Because of space limitations, we highlight here only a few variables we explored.

Socioeconomic elements may explain some difference in the predictors of using technology because of the relatively higher level of industrialization and modernization of individualist cultures, versus the relatively lower levels in collectivist cultures. Although our data comes from only six countries, there is evidence that these relationships hold across the individualism/collectivism dimension. For example, Low (1996) argued that socioeconomic issues create a dilemma in balancing the need to be competitive and efficient through applications of information technology in Asia. Goonasekera (1990) suggested that the introduction of modern communication technology to Third World societies has resulted in the sudden and rapid increase of "social density" or social relationships by bringing to the consciousness of individuals issues and personalities outside their immediate experiences. She reported "...(some societies) have resulted in the emergence of a heightened individual self-identity in order to understand and give meaning to new and unfamiliar situations created by the new media" (p.34). In our current study, in collectivist cultures (Turkey and Thailand) coming from an urban home is a significant determinant of successful use of computer technology. This is likely because urban areas in these collectivist cultures are more exposed to modern technologies and related information, thus holding more similar socioeconomic access to technology as the individualist cultures. In our data, urban home was not a significant predictor of successful use of technology in individualist cultures (United States, Canada, the Netherlands). We suggest that within country dispersion of advanced technology is greater in these individualist cultures.

Other factors that influence successful use of computer technology may include time pressure, infrequent terminal access, unfamiliarity of the communication protocol, and lack of command of English in non-English speaking countries. One of the most exciting findings of this study is that in collectivist cultures, familiarity with foreign languages significantly predicts the successful use of computer technology, while in individualist cultures this variable is not a predictor. Besides socioeconomic elements that lead to exposure to international culture and languages in collectivist cultures, English has been dominating the world of the Internet and computer programs. However, it is not the official or working language for most collectivist cultures around the world. Thus we find that in collectivist cultures the ability to speak multiple languages (especially English) predicts successful technology use. In individualist cultures, where English is widely spoken, multiple language facility is not a significant predictor of successful technology use.

Some seemingly simple variables created even more complex outcomes. For example, we found cultural differences in the way in which subjects expressed their comfort or discomfort with technology. Although there was a significant relationship between age and comfort in both culture types, subjects in individualist cultures expressed their comfort with technology in positive terms (e.g., I enjoy working with machines), while subjects in collectivist cultures expressed these feelings in terms of discomfort (e.g., Computers make me uncomfortable). The explanation for this difference may lie in different styles of managing uncertainty across cultures. Members of collectivist cultures depend more on group and context to reduce uncertainty, which is difficult or impossible while using computers to communicate with distant strangers. Therefore, they would likely express discomfort with the uncertainty created by the technology. Members of individualist cultures, on the other hand, communicate more personal and individual information to manage uncertainty. Since this type of information is more readily available via technology, and since members of individualist cultures have a lower need to avoid uncertainty (Hofstede, 1990), they are less likely to express their comfort in negative terms that reflect some of the uncertainty they feel unable to manage.

What is particularly striking about our overall findings is that the number of predictors for individualist cultures is greater than the number of predictors for the collectivist cultures (as indicated visually by the greater number of significant relationships indicated in Figure 2, versus Figure 3). One puzzling result of this study is that for collectivist cultures, none of the factors on attitudes about technology are significant predictors of successful use of technology, and there are fewer predictors for the factors than in individualist cultures. The reason may be because most of the cross-cultural communication and technology management theories and research designs are the result of works by social scientists from western and individualist cultures. Future research could explore the perspectives and relevant predictors from a collectivist cultural perspective.

Implications and Contribution to HRD

This study gives us new insight into cross-cultural communication as it occurs in global virtual teams. This insight makes a unique contribution to the field of human resource development because it empirically examines an issue critical to the success of the human resource development profession in the new millennium -- application of technology in a global context. Our data sample, representing over 500 participants in six countries, is unique in its size and scope. We present data from individuals actually working in global virtual teams, and thus the findings can be readily interpreted for use in organization settings.

Human resource development professionals interested in facilitating successful global virtual teams need to be particularly sensitive to cultural communication differences as they will impact the ways in which team members communicate. Further, they need to be aware that there are different predictors of successful use of technology based on cultural background. Training may be needed to address culturally bound attitudes about technology in order to facilitate positive technology use. Further, the design and delivery of such training needs to be done in a culturally appropriate way, one that is sensitive to feelings of self-efficacy about using technology (Christoph, Schoenfeld, and Tansky, 1998). We recommend a cross-national training team, like our own research team, in order to best address the differences through a variety of cultural lenses, and to promote global understanding and tolerance.

This study is simply a starting point for research on global virtual teams and the cultural differences that underlie their efficacy. We encourage further research in this area, particularly by practitioners who have access to global virtual teams operating in current business practice.

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Towards a Framework for Teaching and Learning in an Online Environment: A Review of the Literature

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The problem addressed in this paper is the lack of theory specifically related to teaching and learning in an online environment. Through a literature review and analysis, two significant teaching and learning theoretical paradigms are presented. It was concluded that the integration of these two approaches will allow for the emergence of new theories that focus on teaching and learning in on online environment.

Keywords: Online Teaching, Behaviorism, Constructivism

Human Resource Development (HRD) curriculums in academic institutions are currently being impacted by two major factors: the Internet and the growing demand for courses via the Internet. These factors have come about due to the societal move from an industrial age to an information age. This shift has caused adults to use the Internet at a continuous pace for professional, personal, and educational purposes (Eastmond, 1998). With the advances of the technology and software surrounding the Internet, the conversion of courses from traditional face-to-face into Web-based courses has become easier and is occurring more systematically in education (Jiang & Ting, 1998). HRD faculty in higher education have also moved toward the use of the Internet to deliver training and development, organizational development, and career development courses online.

Although teaching via the Internet is growing at a steady pace, the current literature on Web-based courses focuses primarily on the technical processes of design or the differences in outcomes for learners who participated in face-to-face instruction versus those who participated in a course via the Internet. With the expansion of Web-based technology in all areas of HRD, it is evident that it is time for research in Web-based teaching and learning to expand farther than the popular comparison studies of learning outputs (Russell, 1997; Johnson, Aragon, Palma-Rivas, Shaik, & Bilsbury, 1999)..

Although research in the aforementioned area is necessary, there should also be research dealing with the learning theories that conceptualize teaching and learning in an online environment. There must be attempts at theoretical explanations for Web-based or online teaching and learning in order for professionals that teach via the Internet to make teaching and learning decisions with confidence. Until recently these theoretical considerations were not addressed. Research in these areas will give HRD faculty their purpose for teaching in an online environment, help to categorize learners who take online courses; define the role of the teacher in an online environment, and define appropriate methods that can be used in an online teaching and learning environment.

The purpose of this literature review was to determine the theoretical framework for teaching and learning in an online environment. Because theory suggests why events occur in the manner that they do, it is important to begin to link teaching and learning online with current teaching and learning theory. These theories provide a direction to research and practice; hence, it is important for HRD faculty to have a link that will allow them to predict aspects of teaching and learning online. Therefore, the following questions should be asked about online research as educators move into the new century. This review of the literature attempts to seek answer these questions.

- Currently, what are the theories and principles that provide HRD faculty with the most effective methods and strategies of teaching and learning in an online environment?
- Do current theories of teaching and learning supply HRD faculty with a framework of which to develop online teaching and learning activities?

This paper will review the literature surrounding the theory of teaching and learning in an online environment. The purpose of this exploration is to determine the basis of this construct and how it can implicate the instructional design, teaching, and learning process in online educational programs. In order to analyze this application of teaching and learning, bodies of literature from distance learning, teaching and learning theory, educational

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technology, and instructional technology were reviewed within the fields of HRD, adult education, and industrial/organizational psychology.

Review of the Literature

Before any research in any area can take place, a review of the literature must be completed. The review of the literature can summarize previous work on the topic and offer suggestions for future research (Merriam & Simpson, 1995). The original purpose of this literature review was not to present results or findings on teaching and learning in an online environment. The original purpose was the same as any literature review as described by Merriam and Simpson (1995). It was completed as a conceptual foundation to a study focusing on instructional design and online teaching and learning. This literature review was to: (1) provide a foundation for building knowledge in online teaching and learning theory; (2) show how the researchers current study on instructional design advances what is already known about online teaching and learning; (3) help conceptualize the study; (4) help provide and define a framework for the methodology for the study; and (5) offer a collect point of reference for interpreting the data that will be collected from the researchers study on instructional design and online teaching and learning. However, as this researcher reviewed the literature on theories of teaching and learning in an online environment, it became apparent, that there were several different views on what current learning theories best fit teaching and learning online.

These differences reiterated the need for theoretical apporaches as a basis for instructional practice in an online environment. Numerous decisions concerning policy, finances, and education are being made based on online teaching and learning. Some of these decisions are being made based on experience with traditional face-to-face courses. These decisions are atheoretical, yet they affect thousands of potential students each year. It is this researcher's belief that just as in converting a traditional face-to-face course to a Web-based course requires time and effort, the theories and principles that guide practice in traditional face-to-face instruction can not be directly converted to online instruction.

A discussion of the theory surrounding teaching and learning in an online environment is important because it directly affects the practice of the field. What follows is a synthesis of the major issues and differences found in the literature on teaching and learning in an online environment.

Theory Wars in Online Teaching and Learning: Behaviorism versus Constructivism

A major debate has surfaced about the basis of teaching and learning in an online environment. Of the current theories that support online teaching and learning, behaviorism has historically had the greatest impact. However, more courses are being designed online with the cognitive view in mind. Hence, there are two ends of a spectrum relative to teaching and learning online. That is, some researchers view the behaviorist principles as the most suitable for online learning, while others view the constructivist principles, which has its basis in cognition, as the most appropriate.

Historically, behaviorism methods have been used where students are presented information which they repeat back to the teacher. These methods have been predominant in training and development (Peterson & Cooper, 1999). Behaviorists view psychology in terms of resulting behaviors which can be modified by consequences such as rewards or punishments. Behaviorism was used as the basis for designing early audio-visual materials and was the impetus for many related teaching strategies such as teaching machines and programmed texts. Thorndike's connectionism, Pavlov's classical conditioning, and Skinner's operant conditioning were ideas used to give direction to the early researchers who examined the impact of technology on teaching and learning (Thompson, Simonson, & Hargrave, 1992). Although some researchers believe that there is much about behaviorism that is unattractive to learning, a great deal is owed to those theorists who advocated behaviorist principles in teaching using technology.

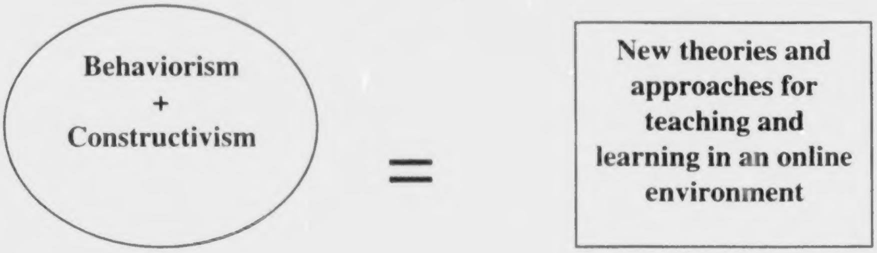
The current trend in teaching and learning, tends to be constructivism which is based in cognitive psychology. With this model, students are viewed as active participants and processors of information. Constructivism, which has as its synonyms active learning, adult learning, and self-directed learning, is changing the way educators think about the teaching and learning. Constructivists believe that learners approach a learning task with a set of personal beliefs, motivations, and conceptions about the subject area and the knowledge to be taught (Holmes & Leitzel, 1993). Kember & Murphy (1990) site that when learners are taught, they construct meanings from the material by relating it to their existing conceptions, frameworks, and knowledge. The implications of constructivism on teaching and learning in an online environment require that teaching methods be selected and implemented that draw on the participant's experience and fosters participation from the participants.

Behaviorism and constructivism have common grounds such as the use of feedback and the importance of assessment. However in teaching and learning situations, the behaviorist wants to take the learner and produce desired behaviors by controlling the environment, whereas the constructivist wants to see how learning occurs. Both these views are important for online teaching and learning. Hence, both these methods are critical to provide a rich teaching and learning climate. The nature of the Internet provides a perfect vehicle to integrate behaviorist and constructivist theories in order to understand the totality of teaching and learning in an online environment.

Behaviorism and Constructivism: A Teaching/Learning Match Made Online

Some researchers would consider it improper to integrate behaviorism and constructivism into a single approach for teaching and learning in an online environment. However, after reviewing the literature on this subject, this researcher takes the risk to conclude that new theories and principles of teaching and learning should be developed for use in an online environment. What are these new theories and how will they affect current practice? Based on the "wars" from the literature, it is evident that new theories and principles may begin to emerge which focus on teaching and learning in an online environment. The figure below shows an equation that should be solved for online teaching and learning.

A New Equation in Online Teaching and Learning


Behaviorism
+
Constructivism
=
New theories and approaches for teaching and learning in an online environment

The use of technology as a delivery medium has fostered the integration of current teaching and learning theories; therefore, as researchers it is important to examine the current theoretical literature as it relates to online instruction and learning. In addition, this researcher believes that the philosophies which undergird the teaching and training of adults should be examined as technology may force educators who deliver online courses to merge toward one consistent philosophy of "teaching" online.

Implications for HRD Theory and Practice

"A literature review functions as a means of conceptualizing, justifying, implementing, and interpreting a research investigation" (Merriam & Simpson, 1995 p. 33). Therefore, this literature review shows that it is necessary that additional research be undertaken in determining theoretical bases for online teaching and learning. HRD scholars and practitioners who teach in an online environment must be aware of the possible issues that surround teaching and learning in this medium. Therefore, the conclusions of this literature review lie in the possible questions that can prompt future research in online teaching and learning.

Research Implications.

The major implication for research on this theoretical match is the development of new research areas and the emergence of theories, principles, and applications that are directly related to teaching and learning in an online environment. These implications for research in the area of online teaching and learning are endless. The most promising areas of research surrounding online learning are the design and development of online learning courses, the evaluation of the instructional design and development process, technological impacts on teaching and learning, online "teaching" competencies, theoretical bases for teaching and learning in an online environment, the impact of online educational programs, and organizational and institutional issues concerning online educational programming. These are just a few areas that will require investigation from researchers as the field begins the new century. Examination of these areas will advance the academic field of HRD by providing new insights about teaching and learning, filling practical and theoretical voids, defining relationships to existing theory, and contribute to the improvement of online teaching and learning.

Practical Implications

The implications for HRD practice lie predominately with instructional design and teaching. Examining a theoretical base for online learning will give those professionals in HRD a sound basis for assessing, designing, developing, implementing, and evaluating online learning materials, courses, and programs. Online teaching and learning strategies and methodologies can be applied to practice when theories and principles are developed for this environment. HRD organizations and practitioners will be able to apply these principles to the development of online programs which can improve practice in all areas of HRD and adult education.

Summary

The Internet has changed the way educators view teaching and learning. The purpose of this literature review was to determine a theoretical framework for teaching and learning in an online environment. What the literature suggests is that an integration of behaviorist principles and constructivist principles may be best suited for online teaching and learning. Although historically the theory which undergirds these principles have not been combined, it is this researchers view that a combination of these principles will create new principles for teaching and learning and will mold online methods and strategies. Hence, a key question for future research has become: will technology force new teaching and learning theories, principles, and models to emerge?

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Learning Human Resource Development through Electronic Discussion

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The purpose of this study was to explore the use of electronic discussion as a teaching and learning strategy for graduate students within a human resource development graduate program. Over 450 student contributions to electronic discussions were analyzed to extrapolate learning processes, group processes and faculty role. Results indicate that learning progressed to a high analytical level during electronic discussion and that group process development facilitated learning as well.

Keywords: Computer Mediated Instruction, Technology, Learning Processes

The delivery of training through on-line courses, web-based instruction, reflector groups, and web-based conferencing is exploding. Yet, research is only beginning to examine the impact this technology has on learning. Previous research has examined instructional design of web-based courses (Braden, 1996), differences between face-to-face teaching and on-line teaching (Russell, 1997), and learning style change in a technology-rich environment (Cohen, 1997). A major question yet to be explored in-depth by the field of human resource development (HRD) is: *"What impact do new technological teaching strategies have on the learning of HRD practitioners?"*

Often the terms teaching and learning are used interchangeably in every day conversations of faculty and students. When it comes to understanding computer-medicated environments, most often the concept of teaching is explored and the unstated assumption is that good teaching will produce high quality learning. However, following a study of 127 courses housed on the world wide web, Boshier, et. al. (1997) indicate that, "While the web holds considerable potential for learner interaction, few courses use much of its interactive capability. Most courses surveyed offer no possibility of collaborative learning. The chief difficulty was conceptual, not technological. It appears that many, if not most courses, were designed by 'instructional designers' obsessed with objectives, assessment of students and arranging things in a hierarchical order . . . the author has uncritically and, in many cases, unwittingly and naively endorsed a transmission model of learning" (p. 340). Thus, as indicated in this study the major focus of faculty using computer-mediated environments has often been on teaching and course design.

Very recently, however, the concept of learning in computer mediated environments has begun to be investigated. For example, Milton, Davis & Watkins (1999) looked at the interactions that occurred within small groups in an asynchronous web-based distance learning environment and found that virtual learning communities developed when there was a fusion of the learning processes and group dynamics. Rheingold (1994) indicated that the potential anonymity of virtual communities contributes to learners feeling that "virtual communities treat them as they always wanted to be treated – as thinkers and transmitters of ideas and feeling beings" (p. 26). Chester and Gwynne (1998) found that two-thirds of the students in an on-line course rated their participation in the subject matter as greater than in a face-to-face course. Holt (1998) analyzed student participation in a national issues forum conducted on the internet for the purpose of studying its effectiveness and analyzing facilitation methods. Holt (1998) described how a multi-stage deliberation process developed that was "largely consistent with the theoretical literature about critical and reflective thinking" (pg. 46). Additionally, this study identified that the discourse developed differently in discussions conducted on the internet versus those conducted by electronic mail. Finally, Milton and Wilson (1999) indicated that "the analysis of these small groups (in a computer-mediated environment) has taught us that the additional dimensions of time and space supported through collaborative technology increase the complexity of the learning and the interdependence of the processes and people involved" (pg. 7). These previous studies indicate a great need for additional information describing the impact of technology on learning processes, learning effectiveness and learning outcomes. The intent of this study was to begin to fill this gap by analyzing learning processes, group processes and teaching processes in courses using electronic discussion.

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Conceptual Framework

Constructivist learning theory provided the overall conceptual framework for this study. This framework was selected because, as Merriam and Caffarella (1999) indicate, "two adult education practice arenas in particular where constructivist and situated cognition concepts are having an impact are in continuing professional education and human resource development" (p. 263).

Constructivist learning theory holds that "learners actively construct and reconstruct knowledge out of their experiences in the world" (Kafai and Resnik, 1996, p. 3). Knowledge construction takes place when learners actively construct knowledge through intellectual engagement and investment in personally meaningful tasks. Constructivists believe that individuals learn through their experience and that meaning is rooted in that experience. The key to learning, in a constructivist framework, is for the learner to find multiple ways to link new information to previous experience. Lambert et al. (1995) refer to constructivism as the epistemological processes of knowing and coming to know (p. 17). Within a constructivist framework learners create their own knowledge by how they put their worlds together. In other words, constructivists focus on the connections that the learner is making between ideas. Novak (1998) believes that learning occurs through a process of assimilating concepts into the cognitive structures by either subsuming concepts under each other, by progressively differentiating concepts from each other or by reconciling the similarities between concepts. The crucial element is that the learner actively creates a knowledge base through the linkages and the experiences. "The design task, therefore, is one of providing a rich context within which meaning can be negotiated and ways of understanding can emerge and evolve" (Hannafin, et. al, 1997, p. 109). For this study, graduate courses were designed and implemented from a constructivist framework. Electronic discussion was viewed as a teaching strategy to facilitate constructivist learning.

Research Questions

The purpose of this study was to analyze one component of technological teaching strategies, electronic discussion groups, with an adult student population. The following research questions were advanced to guide this inquiry:

1. In an electronic discussion, what learning processes do adult learners utilize?
2. In an electronic discussion, how do group processes develop?
3. How does the faculty role change when using electronic discussion?

Methodology

Electronic discussion was used as a teaching methodology in four HRD graduate courses offered within a master's degree program in adult education and HRD at a major Midwestern university. Course activities were designed to offer the learner an opportunity to develop knowledge and beliefs related to course content, integrate experiences, and ultimately reflect on and assess their own level of learning. Electronic discussions were used in each course to analyze case studies, discuss course readings, and reflect on learning achieved during the course. Learners were expected to participate in assigned course activities, as well as, in conversations with other course participants.

Since the intent of this study was to explore the impact of electronic discussion on learning, a convenience sample of courses using electronic discussion was included in this study. All courses were taught by the same instructor. Two courses employed electronic discussion using electronic mail and two courses employed electronic discussion over the internet.

A total of 52 individuals participated in the electronic discussions analyzed for the purpose of this study; 76% were female and 24 % were male. The majority of students enrolled in the courses reviewed in this study had used some form of electronic discussion previously. Participants ranged in age from 25-55 years old.

Following the completion of the four courses, over 450 adult student discussion contributions were analyzed using a constant comparative method of analysis (Glaser & Strauss, 1973). Each individual learner contribution was treated as a separate unique piece of data. All learner contributions were reviewed, compared and analyzed until category themes could be extracted. Data from all the contributions were then coded into a qualitative data analysis software program using the coding scheme developed. In addition to data coding, a system of matrices was designed to analyze each research question under study. One matrix depicted data descriptive of learning processes, one matrix depicted data descriptive of group processes, and one matrix depicted data demonstrating faculty role. From these matrices the researcher was able to see patterns, themes, and processes that developed during the electronic discussions. Quality control was maintained by a second qualitative researcher reviewing the dependability and confirmability (Lincoln & Guba, 1985) of study data, methods and findings.

Findings

The findings from this study will be presented in three areas:

1. learning processes
2. group process
3. faculty role in electronic discussions. (see Figure 1).

Learning Processes Data indicate that adult students, in these courses, used four different learning processes during an electronic discussion. These processes were labeled engaging, developing conceptual relationships, drawing conclusions, and reflecting and self-evaluating.
First, an engagement process developed where the adult learner used multiple and varied strategies to gain comfort with the technology. During this engagement process it was common to receive messages that stated, "I have never done this before but here goes." Adult learners not only engaged with the technology in this phase, but they needed to "get over the technology hump." They would send messages multiple times to make sure that they were received, they would switch Internet providers and change services as they discovered how the technology worked. They would initially engage with the technology to chat, plan snacks and meals for class, and clarify course assignments.
Second, the adult learners began developing conceptual relationships with the course content under study by:
a. linking and differentiating concepts; b. engaging in dialogue linked to their own and their colleagues experiences, and, c. evaluating colleague comments. Each of these three processes were seen within each course, in the same sequence, irrespective of the course being conducted on the Internet or by electronic mail.
Linking. Learners initially used the electronic discussion to link and differentiate concepts. This process was most often initiated by a leaner who linked concepts from two-three course readings. Once this linking happened a different learner responded and further clarified or expanded on the connected ideas. For example, a student enrolled in a continuing professional education course stated:

Schon's work on reflecting in action, Mezirow's work on transformation theory and Brookfield's work involving critical thinking combine into an interesting look at how we might get outside our own minds and see our thoughts and feelings as magnificent contrivances of the world rather than as the only way that things can be. Each work deals with bewilderment and intellectual vertigo but differ in where they place emphasis of work within the topsy-turvery world of our brains.

Following this a second learner stated:

> I feel compelled to reply to J. She did such a splendid job of discussion of Schon/Mezirow/Brookfield. Now for a little perspective from my view of the reading.
>
> Dialogue. *Next the learner's ability to create a dialogue that linked to their own experience developed. In this phase the learners seemed to move away from the focus on their readings and move to a discussion of their own experiences as related to their colleagues' experiences. For example in this phase learners stated:*
>
> *So rather than questioning the role of CPE in fostering these concepts, I question the role of the organizations sending their employees to the CPE programs. Do some of your corporations have a defined policy or process whereby employees can propose changes based on new learning from CPE? In my experience of a hospital setting, it seems to me that most changes come from the top and only the free and easy suggestions from the lower ranks are easy to implement.*

During this dialogue phase, learners attempted to understand and create meaning. As such, learners often made the following type of comment.

> *I've just printed and re-read everyone's comment in the last week. Besides helping me better understand what I've read, I've really thought about everyone's examples.*

> *This leaner then went on to link colleague comments together, provide a summary of the discussion to date and to add her own new comments that moved the dialogue even further.*

Evaluating. It was interesting to note that in each group analyzed for this study, there was a point where one learner took the risk to disagree or challenge the thinking of a student colleague. Sometimes these challenges were subtle such as, "in thinking about Hs comments I am not sure I agree with her full assessment, my ideas take me in a different direction." At other times the challenge was more direct. For example, in a leadership course the students were discussing the movie Norma Rae. One student characterized the movie's main character as a transactional leader. Another student took exception with this and wrote a detailed analysis of transactional versus transformational leadership and challenged the first interpretation as not linked to the course materials or content. This challenge spurred the rest of the group to analyze leadership theories in much more depth. Once that challenge happened, the group moved to yet another level of learning; drawing conclusions.

In the third level of learning, adult students used knowledge to draw conclusions and make decisions. For example, students were discussing the importance training within a business environment. They had discussed both the role of management and the role of training. One learner used this discussion to frame a work-related decision as follows:

> *More and more I believe HRD people must be very business focused, not only in their approach to training but how they manage themselves and their departments. . . The decision to use CBLs as the training tool for new employees may not be the best solution but there are so many aspects to consider. Our company has over 100 employees. Their orientation, training, etc. is solely in the hands of managers. I would score huge brownie points if I delivered a CD ROM with an overview of the company and executive welcome, but I won't because I do not believe that training is the root cause for 50% turnover.*

Finally, some groups reached a fourth level of learning that included a reflection and self-evaluation process. In these groups, learners would share changes in their own thinking, changes in their world views and meta-cognitive processes they used in learning. For example consider the student who indicated:

> *Why is it important to be situated in an authentic activity? I will give you an example via a problem I solved while I read the articles on situated cognition. I believe that I have finally figured out - "Why do the professors always want us to include in our papers the implications of what it is we are studying or alleging through our analysis?" Well, obvious as the answer may seem to you - I have always been bothered by it. First of all, since I am currently not an educator I often could not think of any implications for the field of education. . . . Now, I realize that because I am not situated in an education field I have completely backward perception of these exercises. Also the word implication got in the way for me. My business background led me to want to think about situations as having to have a cause and effect. When I could not say this could cause that I did not have an implications worth writing down. Well, I have been transformed. I don't believe the task of compiling implications is a cause/effect assignment anymore . . . I consider the thinking exercise of realizing implications as a way to hone my tools as a student. Therefore I can let my thinking lead me to the implications and then let the implications lead me to future study. So not I just don't study about situated cognition I try to live in the idea of it.*

Group Processes Data indicated that the group processes seemed to be similar to group processes that develop in face-to-face instruction. Group atmospheres were cordial, communication patterns seemed to be linked and nested, participation patterns included all learners, and group norms seemed to develop. In one group, for example, the discussion norm seemed to be that before entering the discussion on a particular topic, the learner first needed to develop their own written statement of understanding before it was acceptable to comment on a colleague's view. Additionally, level of participation in an electronic discussion was a group norm that developed. In some groups the level of participation was extremely high and the group seemed to push each other for more and more contact. In other groups a moderate level of participation developed and the group norm was not as demanding. Groups also developed ways to tease, have fun and "joke around" on line. These findings are similar to that of Milton, Davis and Watkins (1999) who in their study of virtual learning communities, noted that "each group engaged in their own set of behaviors and established a unique identity that was largely the result of the group dynamics. . . The two issues that seemed to be critical but that detracted from the performance of the groups were agreement of an acceptable level of participation and engagement with the group" (p. 5).

Faculty Role Electronic discussion fostered a change in the faculty role. The faculty role tended to be one of electronically summarizing and linking comments made by learners rather than presenting or sharing information. This summarization and linking process appeared to be most helpful to the groups once they had engaged in dialogue about their own experiences. This study supports Holt's (1998) findings that indicated "facilitating on-line learning involved many responsibilities: creating the environment, guiding the process, providing points of departure, moderating the process, managing the content and creating the community" (p. 48). These changes place faculty members in a guiding and facilitation role, rather than a knowledge transmission role.

One interesting finding of this study was that if the faculty member entered the discussion too early, then the learners talked to the faculty member as the authority figure. However, if the faculty member waited and entered the discussion after colleague relationships had been established between learners, then the faculty member could enter the discussion and the group would treat them as a group member rather than as the authority figure.

Implications for Practice and Research

This study has implications for the practice of HRD, as well as, further research in the field. First, HRD practitioners will benefit from a greater understanding of how technology facilitates not only the teaching process, but the learning process as well. This deeper understanding of the impact of technology on learning, can lead to more effective use of technology in teaching.

It was evident in this study that the learners moved through learning processes of engagement, developing conceptual relationships, drawing conclusions, and reflection and self-evaluation. The electronic discussion format fostered the learners taking a more analytical and reflective approach to their own learning. A number of factors could have contributed to this high level of analysis and synthesis in learning. First, a constructivist approach was used in designing the discussion format and group activities. Learners were asked to focus on connections with content and analysis of experiences. Second, the technology provided the learner the ability to read colleagues' comments, print those comments, go back to course materials and integrate these materials with their colleagues comments, think about what it meant and then, ultimately frame their response. Learners who participated in electronic discussions felt that they used a "more thoughtful" process in framing responses. They also indicated, "You know, there is a record of the things we say, so I think we are accountable in a different way for our ideas than we are in a classroom discussion." A major teaching/learning issue raised by this study, is what course content/activities are best suited for electronic discussion and which are best suited for classroom discussion. It appears that trainers and adult educators will need to address this issue in their consideration of the use of discussion formats within courses. As Boshier et. al. indicate, "From an adult education perspective, it is not acceptable to use the web to emulate the worst of face-to-face courses where power relations are unproblematised and learners constructed as passive recipients of information" (p. 347).

Second, this study has implications for further research. The author considers this to be an initial, preliminary exploration, and the field would benefit from its replication and expansion. Additionally, future research is needed to understand learning processes that develop in computer-mediated environments. For example, the field would benefit from understanding more about the connections between specific technologies, instructional design, learning process, context, and facilitators. What impact do each of these have on the learner in a technology enhanced environment? Holt (1998) concurs and indicated that "further research is needed to investigate the structuring and sequencing of electronic forums, strategies for combining face-to-face and electronic experiences, techniques for effective moderation of on-line conferences, and methods for modeling critical thinking" (p. 48).

Conclusions

In conclusion, this study has begun to identify the impact that electronic discussion has on the learning processes, teaching processes, and group processes within an HRD graduate program. It is apparent that these processes are intricately connected and that each needs to be fully analyzed and understood in order to be employed effectively. As adult educators, we need to move beyond using technology because it is available, exciting, new and unique. We need to ask ourselves, "If I use this technology will it have an impact on learning and how will that impact occur?"

As Chester and Gwynne (1998) indicate, "We can not assume that the skills and pedagogy of face-to-face teaching will be appropriate in cyberspace. We have to be open to change and open to the lessons, both in their delights and their dangers, that teaching on-line can offer" (pg. 9).

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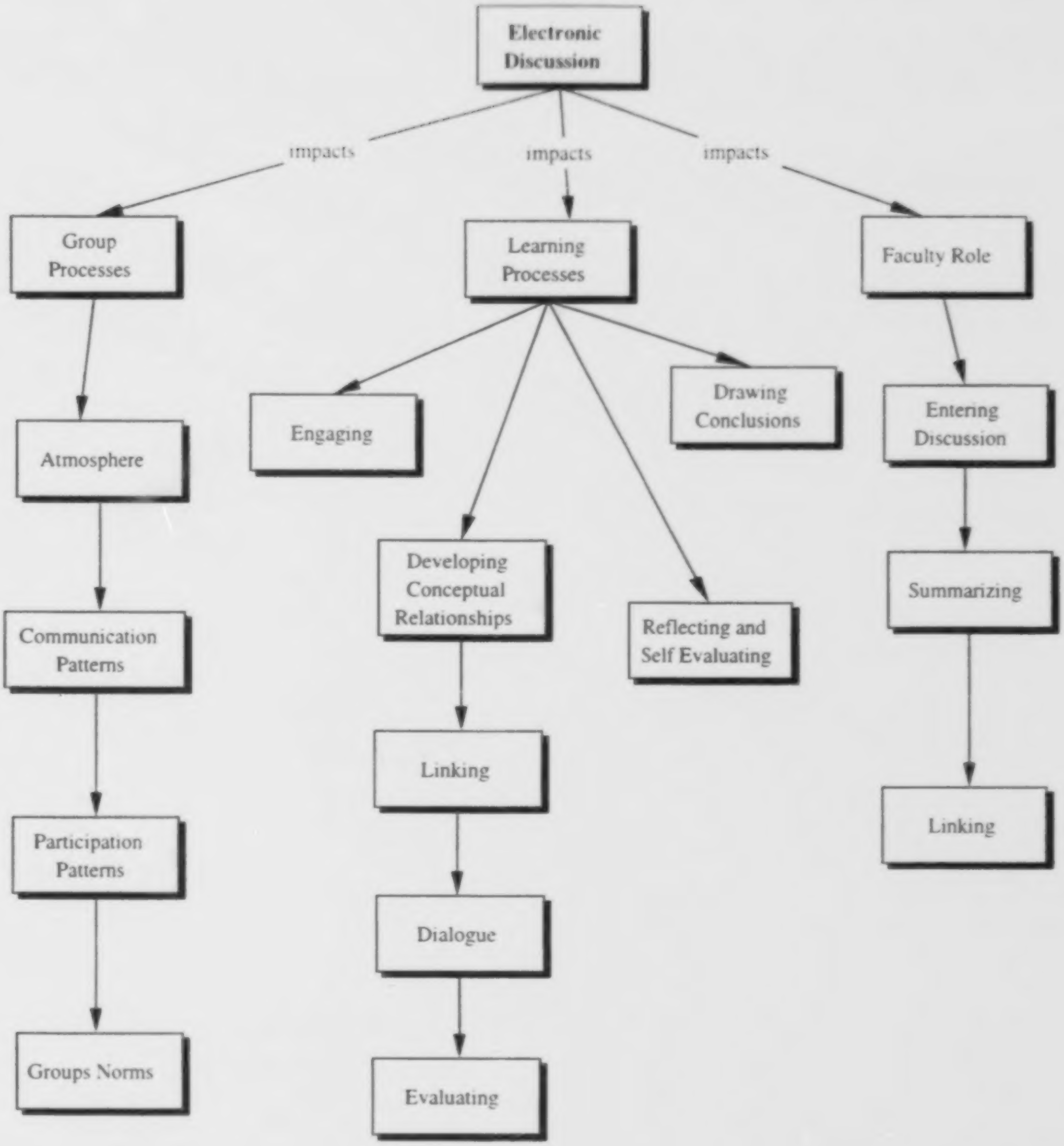
Electronic Discussion
impacts
impacts
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Group Processes
Learning Processes
Faculty Role
Atmosphere
Engaging
Drawing Conclusions
Entering Discussion
Developing Conceptual Relationships
Reflecting and Self Evaluating
Summarizing
Communication Patterns
Linking
Linking
Participation Patterns
Dialogue
Groups Norms
Evaluating

Figure 1: Impact of Electronic Discussion on Learning Processes, Group Processes and Faculty Role

Development Towards What End? An Analysis of the Notion of Development for the Field of Human Resource Development

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The research, theory, and practice of the field of Human Resource Development are based on often unspoken assumptions about the concept of adult development. Examining these assumptions is useful to researchers and practitioners because of the possibility of more deliberate choices and improved scholarship and professional practice. Three alternative views of adult development can serve to distinguish competing schools of thought, each rooted in different philosophical traditions and political thought. The person-centered view aims at self-realization of the individual and is grounded in humanistic psychology and liberalism; the production-centered view focuses on organizational goals and is based on behaviorism and libertarianism; and the definition of development as principled problem-solving in cognitive psychology, progressivism, and pragmatism. Each view serves as a root construct for a specific orientation toward the role and function of the profession. By highlighting the differences between these views and their relative strengths and shortcomings, the author seeks to advance the theoretical foundation of the field and to contribute to more reasoned theory and practice in the field.

Keywords: Philosophy of HRD, Human Development, HRD Theory

Paradigmatic debates are still rare in the field of Human Resource Development (HRD) that is relatively young and concerned with gaining and expanding its academic legitimacy relative to the established fields of adult education, vocational education, and the array of management and organizational sciences. The practice of HRD is firmly established, with US organizations expending over $200 billion per year on HRD interventions (Training, 1997) and an exceedingly vibrant training and consulting industry operating in this country and abroad. Still, there are continued calls for more and better research and recommendations for practice to keep up with the pace of technical, political, economic, and social changes that organizations face in this global economy.

As an academic matter, HRD programs are now firmly established in US graduate schools. HRD enrollments are among the fastest growing in Schools of Education, where the "training of ...HRD professionals is now the 'bread and butter' activity" (Gray, 1997, p. 80). Here, paradigm debates can deepen theory and provide the foundation for new research.

What philosophical debates exist in HRD have centered on whether professional HRD activities should promote 'performance' or 'learning'. Swanson and Watkins argued this issue during the profession's annual conference in 1995, (Holton, 1995), Dirkx juxtaposed earning and learning in discussing the meaning of work, and Barrie and Pace (1998) argued passionately for the adoption of a liberal education framework for the HRD profession. The learning focus is most prominently advanced by those adult education scholars, who claim HRD as an area of practice (Dirkx, 1997). More recently, Kuchinke (1998) has attempted to reconcile these perspectives by using a progressive learning philosophy. Other attempts to comprehend and classify different directions in the field include Russ-Eft's (1996) work identifying three different views of HRD held by consultants and organizations: development-focused, issue-linked, and strategic. Lewis (1996) described a "model for thinking about training evaluation" (p. 3) that differentiated training along several context, process, and outcome factor dimensions and classified it as either proactive or reactive. Watkins (1989) described five alternative metaphors for the HRD professional: organizational problem solver, change agent, designer, empowerer, and developer of human capital.

No attempt, however, has been made to analyze the field in terms of its understanding of 'development', a concept so centrally positioned in the name of the profession. What HRD professionals view—implicitly or explicitly—as the purpose and end of developmental activities that persons in organizations engage in, gives rise to very different models of HRD. Since HRD is an applied field and, therefore concerned with practical problems—deciding what to do and what action to take (Copa, 1985)—HRD professionals address not only what is, but predominantly what should be. Reasoned practice depends on reflective choice of the ends or purposes of action, and it is at this normative level that the distinction between different views of HRD become most salient and

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revealing. Should HRD practice aim at the well-being of the individual worker, as Bjorquist and Lewis (1992) argued, or should the interests of the shareholders predominate, as Friedman (1970) advocated? Should HRD aim solely at responding to business needs and corporate goals as identified by senior management, as Rummler and Brache (1990) proposed, or is a stakeholder model of the organization more appropriate, whereby HRD functions as the advocate of valid and legitimate interests of an inclusive set of groups and shapes corporate strategy (Evan and Freeman, 1988)?

The purpose of this paper is to answer the following questions: How can differing definitions of human development in organizations be used to distinguish alternative HRD philosophies? How do these frameworks differ in terms of their philosophical and political assumptions and contributing schools of thought? How have these frameworks informed HRD theory, and how has HRD practice been conceived from each perspective? And, finally, what new directions are emerging from theory and practice that might overcome the shortcomings of existing philosophies and more adequately answer to the challenges of the rapidly changing world of work?

Human Development and the Field of HRD

HRD theory and practice appear to be driven by three different theoretical approaches related to the purpose of developing persons in organizations. These frameworks can be classified following the classic work of Lawrence Kohlberg and Rochelle Mayer (1972) who distinguished among three streams of educational ideologies, romantic, cultural transmission, and progressive. A similar triarchy was described by Malcolm Knowles (1984) who described three models of adult education: mechanistic/behaviorist, cognitive, and organismic/humanistic, each associated with a unique strategies for learning and based on "three different models of man" (p. 6.6).

The system developed in this article classifies schools of thought according to the central focus of the developmental activity: person-centered, production-centered, and principled problem-solving. Each encompasses a range of models, theories, authors, and schools of thought, is rooted in different philosophical traditions, and makes specific assumptions about the nature of human beings and the nature of organizations and society.

Frameworks of Human Development

Table 1 presents the frameworks of human development in greater detail. Each is described in terms of its roots in philosophy and the social sciences, the proposed aims or end goals, the assumptions about human nature, and about the nature of organizations and the larger economic and societal context. Examples of specific theories, concepts, and strengths and limitations of each theory are also given.

Table 1
Classification of Theories of Human Development

	Person-Centered	Production-Centered	Principled Problem-Solving
Philosophical Roots	• Humanistic Psychology: (Maslow, Rogers) • Romantic Idealism: Rousseau • Existentialism	• Behaviorism: Skinner • Libertarian Philosophy: Smith, Friedman,	• Cognitive-developmental Psychology: Kohlberg • Pragmatism: Dewey, James • Radical Humanism: Aktouf • Postmodernism: Kincheloe
Aims of Human Development	• Self-development, • Allow "inner good" to unfold; Remove barriers to maturation	• Competently and efficiently fulfillling organizational roles; • Increasing performance as defined by organization	• Integration and synthesis of internal and external demands; • Dynamic balance of competing claims; • Self-development through performance
Assumptions about human nature	• Inborn wisdom and goodness; • Health equals happiness	• Needs/wants determined by society/culture; • Health equals adjustment	• Ability to integrate external and internal demands; • Experience is paramount; • Health equals adequate cognitive understanding
Assumptions about nature of organizations	Optimal organizational. functioning achieved through happy people	• Goal oriented, • Goals determined by owners, • Human capital employed to achieve goals	• Stakeholder model; • Temporary and dynamically changing configuration of needs/wants of various stakeholders
Examples	• Maslow's Hierarchy of Needs • Herzberg's 2-factor theory • Spirituality, • Meaning of Work, • Quality of Worklife	• Industrial Training • Rummler and Brache • Mager and Pipe, • Performance Technology	• Lawler: high involvement organizations; • Masick/Watkins: Learning Organization

Person-Centered Development

The concept of person-centered development in HRD is rooted in the philosophical traditions of idealism, humanism, and romanticism. Romanticism was an intellectual movement that was at its height in Europe toward the end of the 18th and early 19th century (Flew, 1979). In more recent times, the romantic notion of development was expressed by A. S. Neill, whose Summerhill represented an example of a school based on these principles, and proponents of the California growth movement, who emphasized inner growth and the connection to one's inner reality. Personality theorists of humanistic psychology—the "third force" in psychology— included scholars such as Henry Murray, Gordon Allport, Abraham Maslow, and Carl Rogers. Strongly influenced by Existentialism, they carried on the romantic tradition in contemporary times. Many concepts and theories in organizational development and HRD in general have their origins in this philosophy.

The person-centered notion of development is the discovery and unfolding of innate qualities, of the inner good and inborn health of the human being, the search for personal fulfillment and meaning. Successful development means being all one can be. Individuals are by nature proactive, rational, self-aware, and complex; they possess freedom and dignity, and carry the responsibility to find meaning for their lives. There is the assumption of an inner spontaneous tendency toward positive values and a strong emphasis on inner states and feelings. Performance, skills, achievements, tasks, and responsibilities and duties are not satisfying in themselves, but important as means to inner growth, awareness, happiness, and health.

Strengths of the person-centered approach. The strength of this philosophy of HRD lies in the compelling idea of the perfectibility of the human being, the importance of individuals and their responsibility to the self, and the role of the untapped potentialities inside every one.

It places the locus of control over and responsibility for the individual's life and actions squarely at his or her feet. This position adheres to the Kantian imperative that persons should always be treated as ends in themselves, never as means to an end. It proposes that employees are stakeholders in their organizations whose rights are on par with the shareholders, i.e. owners of the firm. The perspective paves the conceptual way for employee participation and employee wellness approaches that have been central to organizational development since the 1950s.

Critique. The person-centered view of HRD, however, is also vulnerable as a reasoned basis for HRD because it is largely silent about the economic dimension of work in organizations. While self-development might well be seen as a primary individual goal and perhaps a public good that deserves public support in the form of educational opportunities for everybody, it is not the primary charter of organizations operating in a competitive environment. Organizations incur direct, indirect, and opportunity costs when conducting HRD activities. These costs will put them at an economic disadvantage over organizations who provide fewer HRD activities, unless the pay-off of HRD interventions exceeds their costs and provides a higher return than investing the training budget to, say, upgrading machines or purchasing new equipment. The person-centered notion of human development is insufficient as the sole foundation for HRD, despite its appeal and popularity. The next section will describe the production-centered philosophy of development and evaluate its merits within the context of today's rapidly changing economic and social world.

Production-Centered Development

While the person-centered view of development emphasizes individual needs and goals, the concept of production-centered development stresses the enhancement of the productive capacity of a person as the goal of development. The role of HRD is to transmit knowledge, skills, and social and moral rules of the organization. The process of transmission is conducted through educational technology and a behavioristic approach (Skinner, 1971). Successful development means the acquisition of prerequisite skills, knowledge, abilities, attitudes, and values in order to be able to respond favorably to external demands. This framework depends heavily on role theory (Stryker and Statham, 1985); development is evaluated in terms of the degree of fit between measurable and observable behaviors and role expectations, and not, as in the case of the person-centered view, in terms of feelings, thoughts, or other internal states. In the 1940s this position was expressed well by Dooley in The Training Within Industry Report (cited in Swanson and Torraco, 1995, p. 2): "Training is for the good of plant production—it is a way to solve production problems through people; it is specific and helps people to acquire skills through the use of what they learned."

Strengths of the production-centered approach. The strength of this framework lies in its ability to find quick responses to well-defined problems. Within an immediate time horizon, HRD can help provide the knowledge, skills, and attitudes required to meet clear objectives. In situations where clear goals exist, where these goals are agreed upon and supported, where the ways to meet these goals are proven and known, and the required resources are available, issue-focused HRD can provide the necessary support to meet these important objectives. This view is predominant in the management sciences, including organizational behavior, organizational theory, industrial/organizational psychology, and industrial relations. It posits the rational aspect of an organization, makes planning and strategy possible, and enables planning, forecasting, and goal setting.

Rooted in a libertarian philosophy (Maitland, 1994), the relationship between employee and the organization is characterized by rational and free choice and a clear contractual understanding of the rights (pay, benefits, etc.) and duties (task, working hours, etc) by each party.

Critique of the production-centered approach. The two primary lines of criticism against this view center on the underlying view of the nature of organizations and the value statement inherent in this model. The major criticism of the production-centered view is that it portrays organizations as static, closed, mechanistic systems rather than open systems in dynamic, continuous interchange with the external environment. Requirements change constantly, and employees and managers alike satisfice rather than maximize the demands of multiple constituents. In a similar vein, Weick (1990) asserted that there is a growing consensus that management is "more like cartography than like the board game 'Mastermind' in which people try to discover a pre-set pattern" (p. 317). Without a pre-set pattern of correct answers, goal setting becomes a response to a continuously shifting set of preferences that require active and intelligent interpretation by all participants. Where organizational goals are ambiguous and means to achieving those goals uncertain, narrowly defined job skills are of limited effectiveness. Swanson and Torraco (1995) spoke about this complexity when introducing a taxonomy of performance with two tiers—managing the system and changing the system. As they and other observers of the changing nature of work (for example Reich, 1991) noted, the specific definable and trainable tasks that formed the vast majority of work in the early part of this century are giving way to more amorphous, ambiguous task requirements. This calls for a broader range of skills, attitudes, behaviors, and abilities for which the cultural transmission model with its mechanistic notion of skill transfer may no longer be adequate.

Principled problem-solving as the goal of development

When the person-centered view of development was the unfolding of innate, latent patterns and potentialities, and the production-centered model stressed the adjustment of the individual to the demands of the external environment, the principled problem-solving view seeks to overcome the shortcomings of both. It is the most complex stance and perhaps the most difficult to implement. Based on the progressive educational ideology (a term first introduced by John Dewey) it defines development as "an active change in patterns of thinking brought about by experiential problem-solving situations" (Kohlberg & Mayer, 1972, p. 455). This orientation, with its emphasis on cognitive development, principled and interactive problem-solving, and pragmatic orientation is well suited to serve as a guiding philosophy for HRD in today's rapidly changing social and economic environment.

In contrast to the two previous views, progressivism stresses the interactive, dynamic aspect of problem-solving in a given social situation. It focuses on the primacy of experience and experiential learning, on the active involvement of individuals in emergent problematic social situations. The emphasis is neither on the internalization of established goals or values, nor the unfolding of spontaneous impulses and emotions, but the "active change in patterns of response to problematic social situations" (Kohlberg & Mayer, 1972, p. 455). The aim is the achievement of a solution that satisfies all participants given the specific situational constraints.

A second foundation of this philosophy is cognitive psychology and its central assumption of cognition as mental structures, internally organized wholes or systems used to structure our experience of the external world. Cognition filters the information about the environment we perceive, the experiences that we have, the meaning that we attribute to our experiences, and our thinking about our world in general. Cognitive structures, however, are not fixed but able to change. Cognitive development results from a dialogue between the individual's cognitive structure and the structure of the environment. In a given situation thinking that can envision solutions that are more encompassing and better able to integrate the demands of the various participants is preferred.

The aims of human development in this philosophy are to foster the ability for optimal functioning through critical thinking and problem-solving, for an integration and synthesis of internal and external demands, and of balancing competing claims with the goal of functional (in the broad, pragmatic sense) optimization of the situation. This includes an examination of the underlying assumptions of a given situation, an awareness of the historical conditions that have led to the current situation, the ability to take others' roles and perceive accurately the perspectives of all parties involved, and the personal maturity and integrity to find creative solutions in situations where scarce resources demand tough decisions. Rather than advocating the exclusive development of the self, or blindly adhering to an external goal, this approach suggests the continuous re-definition of a given situation in light of its requirements, the courage to challenge past solutions and examine current assumptions, and the consideration of dynamically changing configurations of the needs and wants of all stakeholders.

Strengths of the principled problem-solving approach. The major strength of this orientation to HRD is its inclusiveness and systematic nature. In a fast-changing world, the resources, concerns, and needs of all must be considered, and an inclusive approach is superior to win-lose or lose-lose propositions. Secondly, this approach is capable to address issues of global scope, social justice and democratic values, and attempts to find solutions to the complex problems of a democratic market economy. It provides for full participation of all employees and has the potential of creating situations where everybody wins.

Critique A major shortcomings of this approach to human development are its requirement for long-term commitment and development in an competitive market place that oftentimes rewards short-term success. Maitland (1994) addressed this problem and argued that political changes must precipitate changes in organizational policies, in order to avoid punishment of organizations that forego short-term profits for the sake of long-term development. As long as organizations are evaluated on quarterly fiscal results alone, long-term strategies that sacrifice short-run results for long-term gain may not become wide-spread. However, as even Aktouf, writing from a radical humanistic perspective, observes: "this movement toward a more human firm is neither a romantic ideal nor a philanthropic gesture, nor a utopia, but a necessity .... [Organizations] need to step out of the Taylorian rut....[T]he time has come for the employee who knows how (and is allowed) to think, to react, to modify" (pp. 417-418).

Secondly, many companies, especially start-up and small firms, are unable to invest in the long-term development of their employees, and there are some job categories that do not require extensive use of higher-level cognitive skills and problem-solving abilities. Lastly, not all employees may be willing to become involved and take on greater shares of responsibility and participation, so that the developmental approach may only be applied selectively.

Conclusion

In this paper, the author proposed that the principal foundations and assumptions of the various theories, concepts, and practices of Human Resource Development might be understood as three distinct approaches: person-centered, production–centered, and principled problem-solving. These approaches are based on different philosophies of development, which is so centrally placed in the name of the profession. This attempt at a classification and explication of the roots and strengths and potential shortcomings of each approach can be useful for furthering theory and practice of this emerging field.

A HRD professional who is, for example, faced with lagging work performance in an organization might approach this issue from any one of the three proposed approaches: From the person-centered perspective, she might propose to post the names of top performers on the lunchroom bulletin board and hold monthly award ceremonies for these employees to instill pride the good performers. From a performance-centered philosophy, she might propose switching from an hourly pay system to a piece rate or pay-for-performance system to provide incentives to work harder. From a principled problem-solving perspective, she might propose an open-book management strategy where employees are given full information about the implications of poor performance for the stakeholders, and charter cross-functional teams to investigate the root causes of the problem and develop solutions. A HRD professional who can select from a number of different approaches will be likely to have a wider range of choices than one who is tied to only one perspective.

A second implication for practice is related to the newly evolving strategic role of HRD. Over the past 10 years, HRD has changed from a narrow function limited to designing and delivering training to a much broader organization-wide role (Gilley & Maycunich, 1998). Recognizing the competitive advantage of a committed and well-qualified workforce, HRD professional are becoming increasingly charged with developing organization-level HRD strategies. Strategic decisions, however, are choices over competing values and principles, and many organizations develop HRD philosophies to guide them. Similarly to the individual examples given above, being aware of the range of options for the HRD strategy will enlarge a firm's range of options. Where HRD professional can enter into a dialogue with other corporate decision-makers over the underlying values and philosophies of the workforce development, more appropriate solutions become possible. Oftentimes, senior managers come from functional backgrounds such as engineering or operations and have little insight into educational issues. If HRD professionals are able to explain the differences between and relative strengths of the developmental approaches based on the person-centered, production-centered, and principled problem-solving approach views, more deliberate and informed decision-making becomes possible.

A third implication of this explication of different HRD philosophies is for educators and trainers of HRD professionals and other educators working in and with organizations. Training and education in HRD should include information and reflection of the paradigmatic and philosophical foundations of the field. While adult and education university curricula often include at least one course addressing the history and philosophy of the respective field (for instance the heated debates over the direction of vocational education between John Dewey and Charles Prosser in the early part of this century), many HRD introductory courses and textbooks that I am aware of give only short shrift to such matters, instead focusing on functional topics such as instructional design and technology. Debates over the philosophical directions of HRD need to be included in HRD education and training, an area of practice so important to the well-being of society and impacting so many employees.

Finally, the issues raised in this paper also impact research and scholarship. Researchers need to be aware of their own philosophies and value positions regarding the aims of developing persons working in organizations. They ought to state their value preference in the written research reports so as to allow the audience to situate the report and understand its merits and limitations. Secondly, empirical work and further theory development are urgently necessary to learn more about the results of HRD activities conducted within each of the three approaches. If one agrees with a contingency approach, and much of the empirical organization behavior research points to the validity of situation and context specific solutions to problems rather than approaches that stipulate "one best way", then we need clarification to questions such as: Under what conditions (related to a firm, its product or service, its workforce, its market etc.) is one approach more effective than the other? How do personal-level variables (age, gender, education, socio-economical background, profession, etc.) interact with each developmental approach? What are the trade-offs of each approach related to the benefits to the employee and the organization and how should they be reconciled? Such contingency theories are beginning to appear in the management sciences [for example, Lepak & Snell, 1999] discussion of the conditions under which organizations should develop expertise from the inside versus hiring it from the outside) and is need in our field as well.

There is also a need to further address the philosophical and moral/ethical dimensions of HRD, areas not easily suited for empirical work. Here, questions include: What are the ethical/moral responsibilities of an organization towards its employees and vice versa? What are the boundaries of development that an organization can demand that an employee undergo? How to resolve value conflicts between an organization's HRD philosophy and the values/beliefs of its employees?

HRD is a field that is growing in importance and size. Because of its pragmatic orientation, much of the theorizing and research has held a functional flavor with largely unstated assumptions about its values. As the field develops, a clearer and more open debate over its core values and philosophies is needed. I hope that this paper can begin a dialogue over one key aspect of the field: the aims and desired outcomes of development of persons in organizations through the field of HRD.

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A Study of the Influence of the Theoretical Foundations of Human Resource Development on Research and Practice

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There is a deficiency of empirically based literature on the relationship between theory and practice in HRD and little attention has been given to the relationship between the theoretical foundations of HRD and HRD research and practice. This study surveyed researchers and practitioners in the HRD academic community as to which theoretical foundations are and will be influencing the field and which foundations are of most importance in research and practice now and in the future. Preliminary results are discussed.

Keywords: Theoretical Foundations, Theory to Practice

There is a deficiency of empirically based literature on the relationship between theory and practice in HRD. Not since the late 1980s have the theoretical foundations of human resource development been discussed or critiqued with any constancy or depth in the research literature and no publications were located during a literature review that discussed the relationship between theory and practice. Yet, the theoretical foundations are "the intellectual underpinnings of the profession (Chalofsky, 1992, p.181), and "research efforts must continually be guided by underlying theory" (Jacobs, 1990, p.70).

While the relationship between theory and practice has generated moderate conceptual discussion in the related literature, inadequate attention has been given to the relationship between the theoretical foundations of HRD and the practice and outcomes of HRD. No research was located that identified the theoretical foundations of HRD by surveying researchers and practitioners in the academic community as to which theoretical foundations are and will be influencing the field and which foundations are of most importance in research and practice now and in the future.

Although there seems to be general agreement that we work from an interdisciplinary body of knowledge, there is no agreement as to what part of this body of knowledge should be considered as essential for HRD professionals (Jacobs, 1990). "Existing knowledge derived from the various contributing areas should be reviewed and analyzed to reveal gaps in knowledge and direct HRD research efforts in a more systematic manner, using theories unique to HRD as the organizing principles"(Jacobs, 1990, p70).

Theoretical Framework

Although the foundations of HRD are evident in several notable HRD publications, no published research identified how scholars and practitioners use the theoretical foundations, or the extent of their influence on research and practice, or even how they were defined. Thus, an obvious conclusion is that the foundations are conceptual in nature and are based primarily on evident opinion and rational perception "whether they are explicitly acknowledged or not" (Passmore, 1996, p. 200) when engaged in HRD research or practice.

The theoretical framework for the study was based on a synthesization of the conceptual propositions of Swanson (1996; 1999), Jacobs (1990), and Hatcher (1999). This synthesization implies that the theoretical foundations derived from several disciplines such as general systems theory, economics, psychology, sociology, and ethics, prescribe a conceptual and ideological framework for the field of human resource development research and practice.

Swanson (1996, 1999), Jacobs (1989; 1990), Watkins (1989, 1990), Hatcher (1999), and others have periodically discussed and modified their interpretations of the theoretical foundations of HRD. However, the foundations of HRD/PI have not been reviewed in light of their currency within the discipline of HRD/PI since their inclusion as theoretical disciplines in the late 1980s (Hatcher, 1999). The current hypothesis is that many of these same disciplines contribute to research and practice of HRD. Thus, it is important to examine the currency and

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efficaciousness of each discipline (Hatcher, 1999) and "contributing bodies of knowledge made explicit" (Jacobs, 1990, p.66).

The disciplines identified in the related literature included economics, education, ethics, general systems theory, learning, sociology, organizational behavior, field and intervention theory, design theory, and psychology (Dean, 1993; Hatcher, 1999; Jacobs, 1989, 1990; Rothwell & Sredl, 1992; Ruona & Swanson, 1997; Swanson, 1996, 1999; Watkins, 1989, 1990). Furthermore, the validity of the theoretical foundations of HRD and the roles that they may play in enhancing or hindering HRD research and practice have been intuitive at best and all but ignored in the related literature (Hatcher, 1999).

Research Questions

The following research questions guided the study:

1. How do respondent's rate theoretical foundations of HRD in terms of current and future influences on and importance to HRD research and practice?
2. Which theoretical foundations of HRD have substantially changed and how have such changes influenced HRD research and practice?
3. To what extent do respondents feel alignment with, understand, and teach the theoretical foundations of HRD?
4. To what extent do respondents perceive that the theoretical foundations *currently*, *should be*, or *will* influence HRD research and practice?

Methodology

The research design was *ex post facto* survey research based on a review of related literature. Empirical and conceptual studies and practitioner-based literature published between the early 1970's and the present were reviewed. The review included human resource development related topics such as training and performance improvement and theoretical framework, theoretical disciplines, and related topics. This review was used to develop survey items for the 81 item Theoretical Foundations of Human Resource Development Inventory, which was used to collect data from the research sample.

Sample population

The study population for the present study was the human resource development (HRD) academic/scholarly community. The sample used in this study is organized under the *Academy of Human Resource Development (AHRD)*, an international organization composed of over 600 recognized scholars, researchers, and practitioners performing HRD-related research throughout the world. The 605 members of the Academy were used as the sample population for the study.

Instrumentation

The instrument was a new survey designed by the researcher from a review of related literature to answer the research questions. A total of 81 instrument items as independent variables were developed from a review of literature and interviews with HRD practitioners and scholars. A total of 6 demographic items as dependent variabies were developed from the literature and interviews.

The instrument was pilot tested with a group of 7 scholar/practitioners to insure face validity and usability. Pilot participants were also asked to establish content validity. Changes suggested by the pilot-test group were implemented prior to final submittal to the study sample. In order to differentiate between research questions variables across time such as "To what extent do respondents perceive that the theoretical foundations *currently*, *should be*, or *will* influence HRD research and practice?" multiple survey items were included in the final instrument.

Data Collection

Procedures included mail-outs of instruments to the entire population of 605 HRD scholars as a subset of the HRD scholar/practitioner community. Follow-up procedures included a second mail out and two follow-up electronic mail reminders.

Data Analysis
Preliminary data analysis included basic descriptive statistics, factor analysis, analysis of variance, and paired samples analyses. Descriptive statistics were used to identify variance in survey items. Multivariate analysis of variance was used to determine the differences in mean scores between variables. Note that the analysis is incomplete.

Results and Findings

Few references were found on theoretical foundations of HRD and no references were located on how changes in theoretical disciplines have influenced HRD, especially HRD outcomes.

Several disciplines were identified as contributing to the knowledge base of HRD, namely education, systems theory, economics, psychology, sociology, and organizational behavior. Other disciplines such as anthropology and management science have also been mentioned (Chalofsky & Lincoln, 1983). Jacobs (1990) indicated five major bodies of knowledge: education, systems theory, economics, psychology, and organizational behavior. Passmore (1996), reflecting on the earlier work of Swanson, said there were three disciplinary bases suggested as the foundation of HRD: economics, general systems theory, and psychology. Swanson recently added ethics as a theoretical foundation to general systems theory, economics, and psychology (1999). Jacobs (1990), Swanson (1999), and Passmore (1996) concluded that although various bodies of knowledge had influenced HRD, HRD should focus on the *economic, psychological, systems theory, social* benefits, and *ethics* of HRD and the contributing areas should be reviewed and analyzed.

The survey was mailed to 605 Academy of Human Resource Development members. At the time of this preliminary report 210 surveys had been returned for a 34.7% response rate. A total of 205 surveys were usable. Non-respondents were not significantly different from respondents in terms of demographics. Reasons for non-response were primarily (a) I do not work with theoretical foundations, and (b) I didn't have time to complete the survey and get it back in time.

Demographics resulted in a profile of respondents. The general profile is a male (53.4%) or female (43.7%), between 41 and 60 years of age (63.6%) with a doctorate (Ph.D. 50.5% and EdD 19.4%) in HRD (12.1%) or Adult Education (7.3%). Respondents' current position was practitioner (31.6%) or faculty member (Assistant Professor 13.1%, Associate Professor 13.1%, Instructor or other faculty 15.5%) and spent varied amounts of time as a practitioner (15% indicated they spent 100% as practitioner and 11.2% spent 30% of their time)

The survey was initially divided into 6 logical sections by the researcher. Each section was designed to answer one or more of the research questions. Preliminary results of the principle components factor analysis with varimax rotation revealed 5 comprehensive factors with eigenvalues over .40 and one undeveloped factor. Thus, the factor analysis essentially supported the preliminary conceptual divisions.

Items 1 – 30 asked for opinions on whether a theoretical *foundation is currently, should be,* or *will* influence HRD research or practice. Multivariate analysis of variance (MANOVA) revealed a significant difference (p = .000) between sociology *is, should be,* or *will* influence HRD research (F=39.683). Paired samples t-tests revealed that sociology *should be* influencing HRD research was significant (t = 8.916 and mean of 4.82) followed by *will* influence (t = 5.717, mean of 4.51), and *is currently* influencing research (t = 8.916, mean 4.04). Sociology's influence on *practice* indicated similar results of MANOVA (F = 65.911) and paired samples t-tests which revealed that sociology *should be* influencing HRD practice as significant (t = 11.260 and mean of 4.72), followed by *will* influence (t = 7.390, mean of 4.27), and *is currently* influencing research (t = 6.186, mean 3.72). See Table 1 for similar results of economics, psychology, ethics, and general systems theory (GST). Note that all paired samples t-tests were significant at the p <.05 level.

Table 1. Theoretical Foundations MANOVAs and Means for Research & Practice by Time Variable

Theoretical Foundation	MANOVA F value for RESEARCH and PRACTICE		Means for RESEARCH			Means for PRACTICE		
			Is	S/B	will	is	S/B	will
Sociology	*39.683	*65.911	4.04	4.82	4.51	3.72	4.72	4.27
Psychology	*10.324	*23.529	4.98	5.27	5.13	4.63	5.14	4.96
Economics	*46.217	*11.260	3.68	4.48	4.51	3.97	4.50	4.39
Ethics	*102.53	*138.46	3.65	4.96	4.47	3.57	5.13	4.43
General Systems Theory	*29.107	*45.901	4.50	5.09	4.62	4.00	5.04	4.59

* Significant p <. 05

Items 31 – 40 asked for opinions on the extent that a theoretical foundation was currently influencing individual respondents' research and practice. Results revealed a significant $p < .000$ difference among all foundations with a MANOVA of 1677.841 for research and 1893.332 for practice. Paired samples t-tests revealed significant difference between all pairs of theoretical foundations with the exception of pairs referenced in Table 2. Means for each theoretical foundation indicated that psychology (4.83, 4.96), GST (4.66, 4.88), ethics (4.33, 4.82), sociology (4.19, 4.29), and economics (3.82, 4.08) influenced research and practice respectively.

Table 2. Theoretical Foundations Pairs *Not* Significant

Theoretical Foundation	*t-test* values		Means for Practice		Means for Research	
	Practice	Research				
Sociology & Economics	*1.663		4.29	4.08		
Psychology & Ethics	*1.663		4.96	4.82		
Psychology & [1]GST	*.656	*1.472	4.96	4.88	4.83	4.66
Ethics & GST	*-.516		4.82	4.88		
Sociology & Ethics		*-.922			4.19	4.33

* NOT significant $p < .05$ [1]General System Theory

Items 41 and 42 requested respondents to rank order the theoretical foundations in order of importance to HRD research and practice. Results revealed that respondents rated economics (3.67) first followed by ethics (3.40), sociology (3.21), psychology (2.43), and GST (2.28) as most important to HRD research. Respondents rated sociology (3.48) first followed by economics (3.12), ethics (3.10), psychology (2.82), and GST (2.57) as most important to HRD practice.

Items 43 through 47 asked respondents to rate the extent they felt theoretical foundations had changed since the inception of HRD as a field of study. Means indicated that ethics (4.06), followed by economics (4.04), psychology (3.95), sociology (3.77), and GST (3.69) had changed. MANOVA revealed a significant difference between theoretical foundations ($F = 1044.445$, $p = .000$). Additional significant results are illustrated in Table 3.

Table 3. Significant Change in Theoretical Foundations

Theoretical Pairs	T-tests	First Mean	Second Mean
Sociology & Psychology	*-1.926	3.78	3.95
Sociology & Economics	*-2.520	3.78	4.04
Sociology & Ethics	*-2.407	3.78	4.05
Psychology & Economics	*-.820	3.95	4.04
Economics & Ethics	*-.192	4.04	4.05
Psychology & Ethics	*-.918	3.95	4.05

*Significant $p < .05$

Items 48 and 49 sought to identify the extent respondents felt the impact of theoretical foundations was clear on research and practice. Mean results indicated that the impact of theoretical foundations was not clear on research (3.53) and practice (3.03).

Items 50-54 asked respondents to rate the extent that each of the theoretical foundations influenced their personal philosophy. Results indicated that their personal philosophies were influenced by psychology (5.04), followed by ethics (4.96), GST (4.95), sociology (4.38), and economics (4.05).

Items 55-59 asked respondents to rate their knowledge and skills of each of the theoretical foundations. Results indicated that respondents had knowledge and skills in GST (5.12), psychology ((4.94), ethics (4.64), sociology (4.34), and economics (4.07). Items 60-69 asked for feedback on the extent respondents learned the theoretical foundations through formal education or informally and/or on the job. See Table 4 for results.

Items 70-75 asked respondents to rate their teaching and understanding of the theoretical foundations of HRD. Results indicated that teaching of theoretical foundations as part of one or more courses was rated higher (4.75) than teaching theoretical foundations as a separate course (2.63). Item 72 asked respondents to rate the extent they felt theoretical foundations ware difficult to teach with a mean of 3.16. Results of questions about student's knowledge of theoretical foundations and whether respondents felt their colleagues had knowledge of or taught theoretical foundations revealed means of 3.8, 4.3, and 4.1 respectively.

Table 4. Means of formal and informal learning of theoretical foundations

Formal		Informal	
Theoretical Foundation	**Means**	**Theoretical Foundation**	**Means**
Psychology	4.94	Ethics	4.88
GST	4.61	Psychology	4.62
Sociology	4.36	Economics	4.37
Economics	4.09	Sociology	4.33
Ethics	3.73	GST	4.19

Items 76 through 81 asked respondents to rate whether they felt theory or practice was, should be, or will be having the most influence on HRD. Results indicated that theory should be (3.91), will (3.59), and is (3.17) having an influence on HRD and that practice will (4.70), is (4.44), and should (4.24) be influencing HRD. Additional statistical analyses such as MANOVAs on demographics as dependent variables with various iterations of items 1 – 81 as independent variables and additional within group analysis are planned.

Conclusions and Recommendations

Several conclusions may be drawn from the preliminary results of the study. It appears that respondents felt that each of the theoretical foundations should, will, and is influencing both HRD theory and practice and that psychology followed by General Systems Theory and ethics had overall most influence on HRD theory and practice. Psychology was having the most influence on individual's research and practice followed by GST and ethics. Respondents rank ordered the theoretical foundations by importance to research as economics, ethics, sociology, psychology, and GST and by importance to practice as sociology, economics, ethics, psychology, and GST. Theoretical foundations that have changed since the inception of HRD as a field of study included ethics, economics, psychology, sociology, and GST. Respondent's personal philosophies were influenced by, in order of influence, psychology, ethics, GST, sociology, and economics. Respondents indicated knowledge and skills in GST, psychology, ethics, sociology, and economics. There was only one difference between rankings of learning the theoretical foundations formally or informally. Formal learning included psychology, GST, sociology, economics, and ethics while informal learning included ethics, psychology, economics, sociology, and GST.

It should be noted that self-reports used in this study are limited to participant's perceptions of theoretical foundations. These perceptions may be limited to the depth of knowledge and understanding that participants have of the five theoretical foundations listed and the extent that participants recognize and comprehend the influence of these foundations on their research and practice.

Theoretical foundations are taught as part of one or more courses and colleagues have knowledge of and teach theoretical foundations. Students do not appear to have knowledge of the theoretical foundations. Theory should be having the greatest impact on HRD and practice will have most influence in the future.

It is interesting that psychology, GST and ethics are having the most influence on both the theory and practice of HRD as a field of study and as influences on individual respondent's research and practice and personal philosophies. Of greater interest is the finding that psychology was ranked fourth in terms of importance to both research and practice while economics ranked first for research and sociology ranked first for practice. Psychology was also rated low in terms of change as a theoretical foundation while ethics rated highest. Finally, theory should be influencing HRD and it appears that practice may have more influence on HRD in the near future.

There are several limitations inherent this preliminary study. One possible limitation is that an over reliance on self-reporting surveys leads to invalid conclusions, especially with content as complex and philosophic as the theoretical foundations of HRD. A case could be made against self reporting due to the inherent bias that scholars and practitioners in HRD may have for or against a particular foundation as well as the influence that deep or superficial knowledge of a particular foundation may have on reporting. For example, a respondent may have a cursory understanding of general systems theory, thus have little or no deep comprehension as to how systems theory impacts their research or practice, yet rate general system's theory high on the survey.

Further research should attempt to identify additional theoretical foundations or foundations mentioned in the literature review herein but not considered prevalent and their influence on research and practice as well as seeking to discover how practitioners and scholars actually use the theoretical foundations in their research and practice. Future research should also identify cultural differences between the influences of theoretical foundations and research and practice. Additionally, in order to gain more depth of understanding, more qualitative methods should be employed in future research to identify whether existing foundations that are being used are in fact the "right" ones. It is also important to identify whether or not there is an over reliance on any one or two foundations and explore the influence this is having on HRD research and practice. Finally, questions concerning how theoretical foundations are considered "essential" by HRD scholars and practitioners and whether or not the field needs to consciously shift the focus from a currently predominant foundation to another less predominant one to enhance the disconnect between theory and practice.

Significance of the Study to New Knowledge in HRD

Although human resource development (HRD) as a field of study has been analyzed from its theoretical perspectives to a degree, there has been no distinct attempt to further explore the theoretical foundations. No research is available that seeks input on the importance and influences of the theoretical foundations of HRD from scholars and practitioners. The present study provides a baseline of data to further our awareness of the importance of the theoretical foundations and provides insights into how researchers and practitioners view theoretical foundations as influences on their own and the HRD field's research and practice.

As an interdisciplinary field of study HRD's theoretical disciplines must be rigorously studied and better understood by scholars and practitioners. Without such a focus on the theoretical foundations of research and practice HRD is destined to remain atheoretical and in nature and poor practice will continue to undermine its credibility (Swanson, 1997).

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Clarifying and Defining the Performance Paradigm of Human Resource Development

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The performance paradigm of HRD has been sharply criticized recently. However, many of the criticisms reflect rather gross misunderstandings that stem in part from the lack of definition and explication of the core assumptions of the performance paradigm. This article proposes a definition and eleven core assumptions. Some of the criticisms of the performance paradigm are refuted and specific myths addressed.

Keywords: HRD Theory, Performance

The field of human resource development has been characterized by a variety of definitions (Weinberger, 1998) and perspectives. Since 1995 there has been an intense debate in the literature around the "learning" versus the "performance" paradigms of HRD (Watkins & Marsick, 1995; Swanson, 1995a, 1995b). This has occurred in spite of the fact that human resource development practice has been found to be increasingly focusing on performance outcomes and developing systems to support high performance (Bassi & Van Buren, 1999).

In this debate the performance paradigm of HRD has come under increasing criticism, some of which reflects misconceptions about the basic tenets of performance-based HRD. For example, Barrie and Pace (1998) argue for a more educational approach to HRD manifested through an organizational learning approach. They were also particularly critical of the performance paradigm:

> *Performance consists of the demonstration of specific behaviors designed to accomplish specific tasks and produce specific outcomes (Swanson & Gradous, 1986). Improvements in performance are usually achieved through behavioral control and conditioning. Indeed, performance many be changed or improved through methods that allow for very little if any willingness and voluntariness on the part of the performers. In fact, behavioral performance may be enhanced decidedly by processes that allow for minimal or no rational improvement on the part of performers in the change process. Their willingness of consciousness as rational agents is neither encouraged nor required. Such persons function in a change process purely as "means" and not "ends" (Holding, 1981)*

Recently, their criticisms became even harsher (Barrie & Pace, 1999):

> *It is the performance perspective that denies a person's fundamental and inherent agency and self-determination, not the learning perspective. All of the negative effects of training come from a performance perspective (p. 295).*

Bierema (1997) calls for a return to a focus on individual development and appears to equate the performance perspective to the mechanistic model of work. She says, "The machine mentality in the workplace, coupled with obsessive focus on performance, has created a crisis in individual development (p.23)." She goes on to say that "valuing development only if it contributes to productivity is a viewpoint that has perpetuated the mechanistic model of the past three hundred years (p. 24)." Peterson and Provo (1999) also equate the performance paradigm with behaviorism.

Dirkx (1997) offers a somewhat similar view when he says that "HRD continues to be influenced by an ideology of scientific management and reflects a view of education where the power and control over what is learned, how, and why is located in the leadership, corporate structure, and HRD staff (p. 42)." He goes on to say that the traditional view in which learning is intended to contribute to bottom-line performance leads "practitioners to focus on designing and implementing programs that transmit to passive workers the knowledge and skills needed to improve the company's overall performance and, ultimately, society's economic competitiveness. In this market-driven view of education, learning itself is defined in particular ways, largely by the perceived needs of the sponsoring corporation and the work individuals are required to perform (p. 43)."

What is striking about these comments and others offered by critics of the performance paradigm of HRD is that they all contain rather gross errors and misunderstandings. A core premise of this paper is that many criticisms

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reflect a poor understanding of what the performance paradigm really means. However, the key reason for the misunderstanding is that the performance paradigm of HRD has not been clearly defined and presented in such a way that its core assumptions and theoretical premises are evident and easily accessible to other researchers. Performance is not a unitary or consensually defined construct, within or outside HRD (Holton, 1999; Swanson, 1999). The result is that performance advocates must blame themselves for the misunderstandings. The first purpose of this paper then is to clearly define the performance paradigm. After years of debate and theory building, it seems that it is time to reexamine "where we stand" with the performance paradigm of HRD and, in the process, clarify misunderstandings in the literature.

A second purpose of this paper is to demonstrate that there is less of a gap between the performance and learning paradigms than is represented by learning paradigm advocates. Simply, when properly and clearly framed, the performance paradigm is not what the learning paradigm advocates present it to be. While there can be no denying that there will always be some tension between the learning systems and work systems in an organization (Van der Krogt, 1998), there is actually more common ground than has been portrayed by performance critics.

In sum, the overall goal of this paper is not to argue for a unifying definition or perspective of HRD. Rather, it is hoped that the debate can become clearer and more accurate as a result of a better articulation of the performance paradigm. As Kuchinke (1998) has articulated, it is probably not possible or even desirable to resolve paradigmatic debates, but that the sharp dualism that has characterized this debate is also not appropriate or necessary.

Definition of the Performance Paradigm of HRD

The performance paradigm of HRD has not been formally defined in the literature, although there are definitions of HRD that are performance-based (Weinberger, 1998). The performance paradigm of HRD may be defined as:

> *The performance paradigm of HRD holds that the purpose of HRD is to advance the mission of the organizational system which sponsors the HRD efforts by improving the capabilities of individuals working in the organization and improving the organizational systems in which they perform their work.*

Core Assumptions of the Performance Paradigm of HRD

1-Organizations must perform to survive and prosper, and individuals who work within organizations must perform if they wish to advance their careers and maintain employment. The performance paradigm views performance as a fact of organizational life that is not optional. If organizations do not perform, they decline and eventually disappear. Performance is not defined as only profit, but rather by whatever means the organization uses to define its core outcomes (e.g., citizen services for a government organization). Every organization has core outcomes and constituents or customers who expect them to be achieved. Even non-profit and government organizations face restructuring or extinction if they do not achieve their core outcomes.

By extension then, if individual employees do not perform in a manner that supports the organization's long-term interests, they are unlikely to advance in the organization and may ultimately lose their jobs. This is not to suggest that employees must blindly follow the organization's mandates. In the short-term they are expected to challenge the organization when necessary but over the long-term every employee must make contributions to core outcomes. Thus, the greatest service HRD can provide to the individual and to the organization is to help improve performance by enhancing expertise and building effective performance systems.

2-The ultimate purpose of HRD is to improve performance of the system in which it is embedded and which provides the resources to support it. The purpose of HRD is to improve performance of the system in which it is embedded (or within which it is working in the case of consultants) and which provides the resources to support it (Swanson & Arnold, 1997). All interventions and activities undertaken by HRD must ultimately enhance that system's mission-related performance by improving performance at the mission, critical performance sub-system, process and individual levels (Holton, 1999). Aside from general ethical responsibilities (Dean, 1993), HRD's primary accountability is to the system within which it resides.

The system's mission, and the goals derived from it, specify the expected outcomes of that system. Every purposefully organized system operates with a mission, either explicitly or implicitly, and the role of the mission is to reflect the system's relationship with it's external environment. For a business organization, the mission may reflect its relationship with its industry, society and competitors. For a non-profit organization, its mission may reflect its relationship with the community and society. It is important to note that the concept of "performance system" is used instead of "organization." A mission may be defined for any system organized to accomplish some purpose. If the system has a purpose, then it also has desired outputs, so performance theory is applicable

The particular system's definition of its performance relationship with the external environment is fully captured by the mission and goals of the organization. In that sense, this model differs from that of Kaufman and his associates (cf. Kaufman, Watkins, Triner & Smith, 1998; Kaufman, 1987) who have argued that societal benefits should be included as a level of performance. This difference should not be interpreted to mean that societal benefits are unimportant. Rather, I argue that the relationship between the performance system and society is most appropriately captured by the mission of that system.

3-The primary outcome of HRD is not just learning, but also performance. The argument about "learning" versus "performance" has positioned the two as equal and competing outcomes. In reality, this is an inappropriate theoretical argument. Performance and learning really represent two different levels of outcomes that are complementary, not competing. Multi-level theory building has become increasingly popular as a means to integrate competing perspectives (Klein, Tosi, & Cannella, 1999). In management, this divide has been characterized as the "micro" domain where the focus is on the individual, and the "macro" domain where the focus is on the organization. Multi-level theory integrates the two by acknowledging the influence of the organization on the individual, and vice-versa:

> *Multi-level theories illuminate the context surrounding individual-level processes, clarifying precisely when and where such processes are likely to occur within organization. Similarly, multilevel theories identify the individual-level characteristics, behaviors, attitudes and perceptions that underlie and shape organization-level characteristics and outcomes (Klein, Tosi, & Cannella, 1999, p. 243).*

From the multilevel perspective then, neither level is more or less important. Furthermore, individual learning would be seen as an integral part of achieving organizational and individual goals.

4-Human potential in organizations must be nurtured, respected and developed. Performance advocates believe in the power of learning and the power of people in organizations to accomplish great things. It is important to distinguish between the performance paradigm of HRD and simple performance management. The later does not necessarily honor human potential in organizations like performance oriented HRD does. Performance oriented HRD advocates remain HRD and human advocates at the core. Performance advocates do not believe that emphasizing performance outcomes invalidates their belief in and respect for human potential.

The performance paradigm of HRD recognizes that it is the unleashing of human potential that creates great organizations. While performance advocates emphasize outcomes, they do not demand that outcomes be achieved through control of human potential. Performance advocates fully embrace notions of empowerment and human development because they will also lead to better performance when properly executed (Huselid, 1995; Lam & White, 1998). Furthermore, they see no instances where denying the power of human potential in organizations would lead to better performance. Thus, they see it as completely consistent to emphasize both human potential and performance.

5-HRD must enhance current performance and build capacity for future performance effectiveness. Kaplan and Norton (1996) suggest two categories of performance measures: outcomes and drivers. Unfortunately, they do not offer concise definitions of either. For our purposes, outcomes are measures of effectiveness or efficiency relative to core outputs of the system, sub-system, process or individual. The most typical are financial indicators (profit, ROI, etc.) and productivity measures (units of goods or services produced) and are often generic across similar performance systems. According to Kaplan and Norton, these measures tend to be lag indicators in that they reflect what has occurred or has been accomplished in relation to core outcomes.

Drivers measure elements of performance that are expected to sustain or increase system, sub-system, process, or individual ability and capacity to be more effective or efficient in the future. Thus, they are leading indicators of future outcomes and tend to be unique for particular performance systems. Together with outcome measures, they describe the hypothesized cause and effect relationships in the organization's strategy (Kaplan &

Norton, 1996). Thus, drivers should predict future outcomes. For example, for a particular company return on investment might be the appropriate outcome measure which might be driven by customer loyalty and on-time delivery, which in turn might be driven by employee learning so internal processes are optimized.

From this perspective, performance improvement experts who focus solely on actual outcomes, such as profit or units of work produced, are flawed in that they are likely to create short term improvement but neglect aspects of the organization that will drive future performance outcomes. Experts who focus solely on performance drivers such as learning or growth are equally flawed in that they fail to consider the actual outcomes. Only when outcomes and drivers are jointly considered will long-term sustained performance improvement occur. Neither is more or less important, but work in an integrated fashion to enhance mission, process, sub-system and individual performance.

6-HRD professionals have an ethical and moral obligation to insure that attaining organizational performance goals is not abusive to individual employees. Performance advocates agree that the drive for organizational performance can become abusive and unethical. In no way should performance oriented HRD support organizational practices that exceed the boundaries of ethical and moral treatment of employees. Clearly, there is ample room for disagreement as to the specifics of what is ethical and moral, but the basic philosophical position is that performance improvement efforts must be ethical. This is not viewed as hard to accomplish because of the assumption described above that effective performance is good for individuals and organizations.

7-Training/learning activities can not be separated from other parts of the performance system and are best bundled with other performance improvement interventions. Table 3 shows five different perspectives of HRD practice, grouped into three categories (Holton, 1999). Category 1, the learning perspective, used to be predominant in HRD practice. Most HRD practice has advanced to category 2, the learning systems perspective. The key change when moving from the learning to the learning systems perspective is that the outcomes focus changes to performance. The primary intervention continues to be learning, but interventions are also focused on building organizational systems to maximize the likelihood that learning will improve performance. One approach within this category, the performance-based learning approach (column 2a) remains focused on individual learning and associated systems, while the whole systems learning approach (column 2b) focuses on multiple levels of learning and associated systems.

The third category, the performance systems perspective, is the one of primary interest in this article. It is quite familiar to those who have embraced performance improvement or human performance technology (HPT) as their disciplinary base (Brethower, 1995). From these perspectives, the outcome focus is on performance like the learning systems perspective, but the intervention focus is on non-learning as well as learning interventions. Within the performance systems perspective, the individual performance improvement approach (column 3a) focuses mostly on individual level performance systems.

Table 1 - Different perspectives of HRD practice

	1 Learning Perspective	*2 Learning Systems Perspective*		*3 Performance Systems Perspective*	
	Individual learning	**(a) Performance-based learning**	**(b) Whole systems learning**	**(a) Individual performance improvement**	**(b) Whole systems performance improvement**
Outcome focus	-Enhancing individual learning	-Enhancing individual performance	-Enhancing multiple levels of performance	-Enhancing individual performance	-Enhancing multiple levels of performance
Intervention focus	-Individual learning	-Individual learning -Organizational systems to support individual learning	-Individual, team, and organizational learning -Organizational systems to support multiple levels of learning	-Non-learning individual performance system interventions -Learning if appropriate	-Non-learning multiple level performance system interventions -Multiple level learning if appropriate
Representative research streams	-Adult learning -Instructional design	-Performance-based instruction -Transfer of learning	-Learning organization	-Human performance technology	-Performance improvement

The broadest approach, and the one advocated by performance-based HRD, is the whole systems performance improvement approach (column 3b). This approach focuses on improving performance outcomes at multiple levels with non-learning and learning interventions. In most organizations there is no profession or discipline charged with responsibility for assessing, improving and monitoring performance as a whole system. This void is directly responsible for the proliferation of "quick fixes" and faddish improvement programs, most of which focus on only a single element or a subset of performance variables. Because HRD is grounded in systems theory and the whole systems perspective of organizations, it is the logical disciplines to take responsibility for whole system performance improvements in organizations.

8-Effective performance and performance systems are rewarding to the individual and to the organization. Performance clearly benefits the organization. However, lost in the literature is the recognition that effective performance benefits the individual equally. In many instances, performance is presented as almost antithetical to individual benefits, implying one must choose between them. In fact, a variety of research tells us that people like to perform effectively:

- The goal-setting literature tells us that individuals build self-esteem by accomplishing challenging goals (Katzell & Thompson, 1990).
- Hackman and Oldham's (1980) job characteristics model and the research supporting it have shown that experienced meaningfulness of work and responsibility for work outcomes are two critical psychological states that individuals seek.
- Self-efficacy is built when individuals experience success at task performance which is referred to as enactive mastery (Wood & Bandura, 1989).
- Individuals may receive valued intrinsic and extrinsic rewards as a result of performance.
- Performance may lead to more career advancement and career opportunities in organizations.

People do not want to fail to perform in their jobs. Therefore, to the extent that HRD helps them be more successful in their jobs, performance-oriented HRD is just as valuable to the individual as the organization. Effective performance can make a significant contribution to individuals as well as their organizations.

9-Whole systems performance improvement seeks to enhance the value of learning in an organization. Contrary to conventional thinking, performance-based HRD actually seeks to increase the value of the individual employee and individual learning in the organization system, not diminish it. Performance-based HRD fully agrees that enhancing the expertise of individual employees is fundamentally important. However, performance-based HRD suggests that individually oriented HRD violates the fundamental principles of systems theory (Bertalanffy, 1968), which tell us that no one element of the system can be viewed separately from other elements. Intervening in only one element of the system without creating congruence in other parts of the system will not lead to systemic change. Furthermore, intervening in the whole system to improve outcomes or drivers alone is also flawed. For example, a company that downsizes drastically may increase profits (outcomes) in the short run, but it will leave itself without any intellectual capital (driver) for future growth. Human performance technologists (Stolovich & Keeps, 1992) and needs assessors (Moore & Dutton, 1978) have understood the need to view the individual domain within the larger organizational system in order to make individual domain performance improvement efforts more effective. Whole systems performance improvement goes a step further to analyze and improve performance of the whole system through a balanced emphasis on outcomes and drivers in the four performance domains.

10-HRD must partner with functional departments to achieve performance goals. One common lament from HRD practitioners is that the performance approach forces them to deal with organizational variables over which they have no control (e.g., rewards, job design, etc.). Performance oriented HRD acknowledges this and stresses that HRD must become a partner with functional units in the organization to achieve performance improvement, even through learning. Opponents often suggest that HRD should focus on learning because they can influence learning. Yet, classroom learning is the only variable in the performance system over which HRD professionals have the primary influence. Learning organization advocates stress the fact that much of the really valuable learning that takes place in organizations occurs in the workplace, not the classroom (Watkins & Marsick, 1993). Performance oriented HRD advocates suggest that if HRD is not willing to be a performance partner then it is doomed to play only small roles in organizations with minimal impact and with great risk for downsizing and outsourcing.

11-The transfer of learning into job performance is of primary importance. Because the dependent variable in performance oriented HRD is not just learning, but individual and organizational performance, considerable emphasis is placed on the transfer of learning to job performance. As Holton, Bates and Ruona (in press) point out, researchers are still working to operationalize the organizational dimensions important to enhancing transfer. Nonetheless, there is widespread recognition that the transfer process is not something that occurs by chance or is assured by achieving learning outcomes, but rather is the result of a complex system of influences (Baldwin & Ford, 1988). Learning is a necessary, but not sufficient, condition for improving job performance through increased expertise.

Performance advocates are known for emphasizing measurement of HRD outcomes to see if outcomes are achieved. Measuring performance is a common activity in organizations, so it is logical that performance oriented HRD would also emphasize measurement. This emphasis stems from two key observations. First, it seems that important performance outcomes in organizations are almost always measured in some manner. Thus, if HRD is to improve performance, then it must measure its outcomes. Second, components of organizational systems that are viewed as contributing to the organization's strategic mission are usually able to demonstrate their contribution through some measurement. Thus, if HRD is to be a strategic partner, it must measure results.

Myths About The Performance Paradigm of HRD

1-Performance is behavioristic. The performance paradigm is not the same as behaviorism. The performance paradigm is most concerned that performance outcomes occur, but in no way should it be interpreted to restrict the strategies and interventions employed to behavioristic ones. Barrie and Pace's (1998) contention that "improvements in performance are usually achieved through behavioral control and conditioning" is simply wrong. Similarly, Bierema's (1997) view that the performance approach is "mechanistic" and Dirkx's (1997) view that it leads organizations to "transmit to passive workers the knowledge and skills needed" are also wrong. The performance paradigm advocates none of these things, nor must it lead organizations in that direction. This myth probably arose because of the early work in performance technology which indeed grew out of behaviorism (Gilbert, 1978). It may persist for two reasons: a) the performance paradigm places considerable emphasis on building effective systems, in addition to individual development and b) performance-based HRD sanctions interventions which change the system in which the individual works, but do not involve the individual.

It is perfectly possible for a performance-oriented person to take a humanistic approach to HRD, as long as that approach will lead to performance outcomes. For example, interventions that attempt to spark more creativity and innovation in an organization can rarely be done using a behavioristic strategy. Or, a more spiritual approach to adding meaning to employees lives may be quite appropriate, if it leads to performance outcomes. Furthermore, the performance paradigm would not restrict learning solely to the objectivist paradigm (Mezirow, 1996), but would also embrace critical and transformational learning if needed to improve performance. In fact, many organizational change interventions to improve performance encourage employees to think more critically about their work and the organization. The performance paradigm can and does adopt any type of HRD strategy, as long as outcomes occur which further the mission of the system.

2-Performance is deterministic. Another mistaken belief is that the performance paradigm demands that outcomes of HRD interventions be pre-determined before the interventions. If that were true, then the only interventions that would be acceptable would be those for which outcomes could be determined in advance, thereby leaving out strategies such as the learning organization. In fact, the performance paradigm advocates no such thing. Performance advocates are just as comfortable as learning advocates with less certain outcomes, provided that outcomes do occur at some point. For example, in a learning organization example, an organization does not need to know exactly where the performance improvement will occur, but a performance advocate would say that they should expect to see that performance improvements do occur at some point and be able to assess outcomes when they do occur.

3- Performance ignores individual learning and growth. The performance paradigm honors and promotes individual learning and growth just as much as a learning paradigm does. The key difference is that the performance paradigm expects that learning and growth to benefit the performance system in which it is embedded. That is, learning and growth for the sole benefit of the individual and which will never benefit the organization is not acceptable for organization-sponsored HRD. Note that many performance HRD advocates (including this author) would honor learning and growth of the individual as a core outcome for other circumstances, but not for organization-sponsored HRD.

4-Performance is abusive to employees. There is little doubt that a performance approach to HRD can be abusive to employee, particularly when organizations use cost-cutting through downsizing as a substitute for sound performance improvement. However, this is a problem of implementation, not one that is inherent in the theoretical framework. Recent research (e.g., Huselid, 1995; Lau & May, 1998) clearly shows that creating an environment that is supportive and respectful of employees is not only the right thing to do, but also results in improved performance. When properly implemented, performance-based HRD is not abusive to employees.

5-Performance is short-term focused. Once again, this is a problem of implementation, not theory. It is true that many organizations place too much emphasis on short-term results. However, most organizations have learned that focusing on short term performance and not building capacity for long-term success does not work. There is nothing inherent in performance theory that says it must be short-term. Many long-term interventions have been abused by companies and inappropriately conducted with a short-term perspective (e.g., TQM). Performance oriented HRD is no different—some will do it right, and others will not.

An Unresolved Issue: Control of Learning and Individual Growth

There are some unresolved issues that divide the performance advocates from individual learning and development advocates. These seem to be deeply held values and philosophical assumptions (Ruona, 1999). The issue of organizational control over the learning process and outcomes is a difficult one for those who believe that only the individual should control his or her learning process (Bierema, 1997). It may be the one issue about which there can be no agreement because it is a philosophical issue about which people have passionate feelings.

The performance paradigm accepts the premise that the organization and the individual should share control of the individual's learning if the organization is the sponsor of the intervention. However, performance advocates would argue that ignoring performance in favor of individual control may ultimately be bad for the individual if the organization is not able to survive or prosper. The individual employee presumably needs the benefits of employment (e.g., economic, psychological, instrumental) which will only exist if the organization thrives. Thus, sharing control in order to advance organization performance is viewed as appropriate and beneficial to both parties.

The other argument for shared control is an economic one. Simply, if the organization is paying for the HRD efforts, it has a right to derive benefits from it and share control over it. This is one area of criticism that performance advocates truly struggle to understand. It is difficult to understand how organizations can be expected to pay for HRD efforts, but yet have those efforts focus primarily on what is good for the individual. To performance advocates, this sounds perfectly appropriate for schools and universities in a democratic society, but not for organization-sponsored HRD. In fact, most would wholeheartedly support the individually oriented philosophy for learning activities outside of organizations. Yet, most performance advocates also understand there are deeply held fears about institutional control over individual learning. Nonetheless, they view the situation as different once HRD crosses the organizational boundary and employers fund HRD efforts.

Why the Performance Paradigm is Important

Perhaps the best way of thinking about the importance of the performance paradigm is to ask this question: Could organizationally sponsored HRD survive if it did not result in improved performance for the organization? Most would agree that the answer is no. Like all components of an organization, HRD must enhance the organization's effectiveness. The performance paradigm is most likely approach to lead to a strategic role for HRD in organizations. HRD will only be perceived as having strategic value to the organization if it has the capability to connect the unique value of employee expertise with the strategic goals of the organization (Torraco & Swanson, 1995). While it would be naïve to think that the performance and learning paradigms would ever converge, it is important to realize that there may be much more common ground than has been stated by learning advocates. Further scholarly research and debate is needed to more clearly articulate the common ground as well as the differences.

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A Holistic Approach Towards Motivation to Learn

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The purpose of this study was to identify key variables within and outside the learning context that could affect motivation to learn during training. Task autonomy, extrinsic rewards, organizational orientation toward quality improvement, and a work environment within which people live up to high ethical standards were found to be the most important predictors for motivation to learn during training.

Keywords: Learning, Motivation, Work Environment

According to DeSimone and Harris (1998), learning can be defined as "a relatively permanent change in behavior, cognition, or affect that occurs as a result of one's interaction with the environment" (p. 56). DeSimone and Harris further state that "learning is an important part of all HRD efforts. Whether you are training a carpenter's apprentice to use a power saw, conducting a workshop to teach managers to use to discipline more effectively, or trying to get meatpackers to understand and follow new safety procedures, your goal is to change behavior, knowledge, or attitudes through learning" (p. 56). DeSimone and Harris (1998) make the point that HRD professionals and supervisors who understand the learning process and how to create environments that facilitate learning can design and implement more effective HRD programs.

When it comes to maximizing learning outcomes, researchers have identified three factors that are perceived to affect learning: (1) trainee personal characteristics; (2) training design; and (3) training transfer climate (Baldwin & Ford, 1988; Baldwin & Magjuka, 1991; DeSimone & Harris, 1998).

Briefly, training design "involves adapting the learning environment to maximize learning. Training design issues include (a) the conditions of practice that affect learning, and (b) the factors that affect retention of what is learned" (DeSimone & Harris, 1998; p. 64). In terms of the training transfer climate factor, researchers have shown that the degree to which learning is transferred back to the job greatly depends on how conducive the work environment is towards learning. In particular, supervisory and coworker support for new learning, task cues - the degree to which characteristics of trainee's job prompt or remind him or her to use new skills and knowledge acquired in training, and a continuous-learning culture have been found to be significantly associated with training transfer (Baldwin & Ford, 1988; Clark, Dobbins, & Ladd; 1993; Rouillier & Goldstein, 1993; Tracey, Tannenbaum, & Kavangh, 1995).

In terms of trainee personal characteristics, the personal attributes of trainability, personality, and attitudes have been found by researchers to affect learning. Some of the personality traits that have been identified as influential factors during learning are locus of control, need for achievement, independence, extraversion, openness to experience, and cognitive playfulness (DeSimone & Harris, 1998). As far as attitudes toward learning are concerned, research by Noe (1986) has shown that "an employee's attitudes toward career exploration and job involvement have an effect on both learning and its applications to the job" (DeSimone & Harris; p. 64). Trainability, finally, refers to the degree to which a learner has the motivation and ability to learn as well as perceives the work environment to be supportive of learning.

According to DeSimone and Harris (1998), "trainability is an important factor in HRD. Placing employees in programs they are not motivated to attend or are not prepared to do well in can waste time and resources" (p. 61). The importance of identifying the factors that affect motivation to learn during training, therefore, cannot be overemphasized.

With regard to the importance of understanding the motivation to learn construct, Clark et al. (1993) stated the following:

> Recently, several individuals (e.g., Noe, 1986) have recognized that motivation to learn is critical for training effectiveness and that researchers need to identify factors that foster such motivation. Without motivation to learn, the most sophisticated training program cannot be effective. A common complaint of trainers is that trainees enter the training environment with little motivation to learn and thus training is doomed to fail from the beginning. Hence it is important that the training literature develop a better understanding of the motivation-to-learn construct and the factors that affect it. (p. 293)

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Clark et al. (1993) further stated that despite its importance, the construct of motivation to learn has been largely neglected in training research. The authors attempted to address this research gap by conducting a structural equations modeling study. The purpose of the study was to explore the effects of several contextual factors on training motivation. Their survey instrument was designed to measure training motivation, expected job and career utility of training, peer and supervisor training transfer climate, involvement in decision to be trained, and decision-maker credibility.

The structural equations model for Clark's et al. (1993) study was built upon expectancy theory. The underlying premise for the model was that training motivation is a direct function of the extent to which the trainee believes that training will result in either job utility or career utility. Clark et al. (1993) defined career utility as "the perceived usefulness of training for attainment of career goals, such as getting a raise or promotion, or taking a more fulfilling job" (p. 294). Job utility at the same time was defined as "the perceived usefulness of the training course to facilitate goals associated with the current job, such as increased productivity, reduced errors, or better problem-solving skills" (Clark et al., 1993; p. 294).

In summary, the structural equations modeling study by Clark et al. (1993) revealed the following important findings: (a) perceived job and career utility of training significantly predicts training motivation, (b) involvement in the decision to be trained results in higher perceptions of job and career utility, (c) the credibility of the individual recommending or requesting training affects job and career utility, and (d) perceived supervisory support for training transfer affects anticipated job utility and thus motivation to learn during training. However, Clark et al. (1993) pointed out that a limitation of their study was that not all variables affecting training motivation were included in it. In particular the excluded variables of job involvement, organizational commitment, and achievement motivation were cited as being important to motivation to learn but not included in their study.

The construct of pretraining motivation was researched further by Facteau, Dobbins, Russell, Ladd, and Kudisch (1995). Through structural equations analysis with LISREL VII the authors of this study attempted to determine whether trainees' general perceptions of the training environment had an influence on pretraining motivation as well as training transfer. Morever, the authors attempted to determine the degree to which pretraining motivation and training transfer were influenced by social support for training and task constraints in the work environment. Social support for training was defined in terms four organizational constituents - top management, supervisors, peers, and subordinates, while task constraints as lack of resources.

Training incentives was also used as a predictor in this study. Training incentives was defined in terms intrinsic incentives - the degree to which trainees believed a variety of intrinsic benefits were likely to result from successful completion of training, extrinsic incentives - the degree to which training would result in such tangible external rewards as pay raise and promotions, and compliance - the degree to which training was taken because it was mandated by the organization. Other predictors that were used in this study were: (a) career exploration and planning; (b) organizational commitment; (c) support for training transfer; and (d) training reputation.

In short, the Facteau et al. (1995) study found training reputation, intrinsic and compliance incentives, organization commitment, perceived training transfer and three social support variables (subordinates, supervisor, and top management) to be predictors of pretraining motivation. However, unlike previous studies, extrinsic incentives as well as career exploration and career planning were not found to be significantly related to pretraining motivation.

Facteau et al. (1995) concluded their study by once again stressing the importance of examining the organizational context within which training exists when investigating training motivation. Some organizational factors that were cited as relevant to the study of pretraining motivation were the organizations' strategic plans, layoff policies, emphasis on employee development and continual learning, creation of self-managed work teams, and climate.

Purpose of the Study

Given the scarcity and limitations of research on the important area of motivation to learn, the main purpose of this study was to bridge some of the above stated research gaps by identifying the key variables within and outside the learning context that could affect motivation to learn during training. What distinguishes this study from previous ones is that it takes a more holistic approach towards training motivation by incorporating in its design organizational variables that are also perceived to affect motivation to perform. Given that the ultimate goal of training is to enhance performance, the underlined premise of this study is that motivation to learn will not only be affected by the immediate learning environment, but the organizational variables that affect performance as well. Therefore, this study assumes that a trainee will be more motivated to learn during training if he/she is a member of a high performance system which in turn expects and rewards exemplary performance.

Theoretical Framework

Aside from the previously cited research pertaining to the motivation to learn construct, the theoretical framework of this study was also based on the sociotechnical systems (STS), total quality management (TQM), and training transfer theories and research which in turn furnished the training and organizational variables projected to have an influence on employee and organizational performance. Briefly, this study incorporated in its design the following learning and organizational dimensions: training transfer climate; learning climate ; management practices; employee involvement; organizational structure; communication systems; reward systems; job design; innovation practices; technology management; teamwork climate; ethical work culture; and process improvement climate. Organizational performance was defined in terms of the following dimensions: quality, productivity, job satisfaction, and rate of new technology adaptation.

Research Questions

In short, this study attempted to answer the following research questions:

1. What is the degree of association between each of the identified training transfer climate, learning, and organizational dimensions with motivation to learn during training?
2. To what extent is a high performance system, as defined by the STS and TQM theories, associated with motivation to learn during training?

Methodology

Instrument

The instrument for this study consisted of a 99 Likert item questionnaire which was designed to assess the organization in terms of the earlier described dimensions. Many of the dimensions were assessed with scales that were used or described in previous instruments or research , while several were designed specifically for this study. The questionnaire was pilot-tested on a group of 15 participants before the main study for clarity. Moreover, a group of seven experts reviewed the instrument for content validity.

Subjects

The sampling frame of this study consisted of 35 employees of a small distribution and light manufacturing firm, 30 employees of an engineering firm, 10 employees of a small manufacturing firm that attended total quality management training, and 54 salaried employees of a large Midwestern Bank who were asked to complete the questionnaire after attending technical training. Given that all but 35 of the participants have returned their questionnaire (94/129), the response rate of this study so far is calculated at 72.9%. In all, 63.6% of the respondents were males and 36.4% females. In terms of education, 31.7% of all respondents were high school graduates, 13.4% obtained an associates degree, 35.4% had a bachelors, 15.9% a masters, and 3.7% a PhD. Lastly, 31.1% of the participants were hourly employees, 4.4% were administrative personnel, 36.7% were salaried employees, 11.1% held a supervisor's job, while 12.2% and 4.4% were middle and senior managers respectively.

Data Analysis

Once all the data from all participants was collected, both descriptive and inferential statistics were used to analyze it. With regard to research question 1, correlational and regression analyses were used to describe the extent to which the identified training transfer climate, learning, and organizational dimensions are associated with motivation to learn during training. Correlational and regression analyses were also used to answer research question 2 and thus determine the extent to which a high performance system, as defined by the STS and TQM theories, is associated with training motivation. Coefficient alpha of the instrument was calculated at 0.97 which indicates that the instrument is highly reliable.

Results

As shown in Table 1, the motivation to learn variable was found to be significantly correlated with 30 of the 99 variables of the questionnaire. The correlations ranged from 0.215 to 0.399 and covered variables from a variety of dimensions. With regard to the learning and training transfer dimensions, motivation to learn during training was found to exhibit the highest association with the variables that dealt with rewards for learning, especially extrinsic rewards, as well as with the degree to which the trainee is held accountable for training received. Interestingly enough, task cues and supervisory support for new skills and knowledge, two of the strongest predictors of training transfer, were not found to be significantly correlated with motivation to learn. Other learning and training transfer variables that were not found to be significantly associated with motivation to learn during training were: reduced workload upon return from training, having input into the type of training the employee attends, and clearly stated training program goals and objectives.

In terms of the other organizational dimensions, motivation to learn during training was found to be significantly correlated with variables form the job design, teamwork, and innovative/competitive organization dimensions. Moreover, motivation to learn was found to be associated with a work environment that is characterized by a high degree of employee involvement, high ethical standards, and flexible policies and structures. Within such an environment coworkers produce at the expected level, employees are praised by their supervisor for outstanding performance and the system regards people as more important than technology. It is important to note that the variable that was found to exhibit the highest correlation ($r = 0.399$, $p < 001$) with motivation to learn was the task autonomy variable of having influence over the things that determine how one's work gets done.

In all, motivation to learn during training was found to be more highly associated with the following variables: the degree to which one has influence over the things that determine how his/her work gets done ($r = 0.399$, $p < 001$); the degree to which learning is well rewarded ($r = 0.364$, $p < 001$); the degree to which one receives such extrinsic rewards as pay and promotion when applying new skills and knowledge acquired in training ($r = 0.360$, $p < 001$); the degree to which the organization regards people as more important than technology ($r = 0.353$, $p < 001$); the degree to which one has independence and freedom in how he/she does the work ($r = 0.346$, $p < 001$); the degree to which coworkers produce at the expected level ($r = 0.327$, $p < 001$); and the degree to which one's job requires skill variety ($r = 0.305$, $p < 001$).

The results of the stepwise regression analysis of the motivation to learn during training variable is shown in Tables 2 and 3. As it is shown in Table 2, the produced regression model accounted for almost 33% of the total variance of the dependent variable and it incorporated in its design four independent variables. Task autonomy, or having influence over the things that determine how one's job gets done, accounted for 14.8% of the total variance and it can thus be considered as the most important predictor ($b = 0.364$; $p = 0.001$) of this regression model. Receiving such extrinsic rewards as pay and promotion when applying the skills and knowledge acquired in training ($b = 0.282$; $p = 0.011$) was the second variable selected by the regression model and accounted for 7% of the total variance. The extent to which quality improvement has higher strategic priority than short-term financial gains ($b = 0.351$; $p = 0.002$) and people live up to high ethical standards ($b = 0.288$; $p = 0.011$) were the last two variables selected by the regression model and accounted for 5.4% and 5.7% of the total variance respectively. Given the high tolerance values depicted in Table 3, one may conclude that multicollinearity was not a problem for this regression model.

Summary and Conclusions

In terms of previous research, this study agrees with Clark's et al. (1993) conclusion that career utility, or the perceived usefulness of training for attainment of such career goals as raise or promotion, is a significant predictor of training motivation. This in turn contradicts Facteau's et al. finding according to which extrinsic incentives is not a significant predictor of pretraining motivation. However, unlike Clark's et al. study, this study failed to show an association between supervisory support for training transfer and motivation to learn during training. Motivation to learn during training was instead found to exhibit a low to moderate correlation ($r = 0.250$, $p < 0.05$) with supervisory praise and recognition for outstanding performance.

In summary, what the regression model of this study suggests is that motivation to learn during training will be predominantly depended on the extent to which the trainee holds a job that assures him or her task autonomy, he or she expects to receive such extrinsic rewards as pay and promotion when applying newly acquired skills and knowledge, and functions in a quality driven organization within which people live up to high ethical standards. In

Table 1. Significant Correlations of Motivation to Learn with Learning and Work Environment Variables

	Motivation To Learn
Learning and Training Transfer Variables	
Have all necessary skills/knowledge to perform my job at the expected level	$r = 0.250^{*}$ (N = 87)
Right people are sent to training	$r = 0.261^{*}$ (N = 87)
Coworkers praise and recognize application of new skills and knowledge	$r = 0.283^{**}$ (N = 86)
Held accountable for received training	$r = 0.298^{**}$ (N = 86)
Receive extrinsic rewards (pay and promotion) when applying new skills/knowledge	$r = 0.360^{**}$ (N = 83)
Overall, learning is well rewarded	$r = 0.364^{**}$ (N = 87)
Job Design Variables	
Receive fair pay for work I do	$r = 0.246^{*}$ (N = 85)
My job requires skill variety	$r = 0.305^{**}$ (N = 86)
Have independence and freedom in how I do the work	$r = 0.346^{**}$ (N = 86)
Have influence over the things that determine how my work gets done	$r = 0.399^{**}$ (N = 87)
Teamwork Variables	
People are rewarded for teamwork not as individuals	$r = 0.235^{*}$ (N = 86)
Member of self-directed work team	$r = 0.239^{*}$ (N = 86)
Have influence on performance ratings peers receive	$r = 0.289^{**}$ (N = 86)
Innovative/Competitive Organization Variables	
Very innovative organization	$r = 0.253^{*}$ (N = 85)
Very competitive organization	$r = 0.259^{*}$ (N = 85)
Risktaking is not punished	$r = 0.270^{*}$ (N = 84)
Performance Indicators	
External customers are satisfied with quality of our services	$r = 0.243^{*}$ (N = 84)
Coworkers produce at the expected level	$r = 0.327^{**}$ (N = 85)
Work Environment variables	
People put in above minimum effort to help the organization succeed	$r = 0.215^{*}$ (N = 86)
Have easy accessibility to others I need in order to perform my job	$r = 0.216^{*}$ (N = 87)
Organizational policies and structures are flexible	$r = 0.225^{*}$ (N = 83)
Organization has strong commitment to me	$r = 0.229^{*}$ (N = 87)
Supervisors challenge people to improve the system	$r = 0.233^{*}$ (N = 86)
Few policies restrict innovation	$r = 0.244^{*}$ (N = 84)
I am very satisfied with this company	$r = 0.247^{*}$ (N = 86)
Receive praise/recognition for outstanding performance from supervisor	$r = 0.250^{*}$ (N = 86)
High degree of employee involvement	$r = 0.252^{*}$ (N = 87)
Decision making involvement	$r = 0.274^{*}$ (N = 87)
People live up to high ethical standards	$r = 0.283^{**}$ (N = 86)
People are more important than technology	$r = 0.353^{**}$ (N = 85)

*. Pearson correlation is significant at the 0.05 level (2-tailed)

**. Pearson correlation is significant at the 0.01 level (2-tailed)

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Table 2. Stepwise Regression Model for Motivation to Learn During Training[a,b]

Model	Variables Entered	 Removed	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	Have influence over the things that determine how my work gets done		.399	.159	.148	1.04
2	Receive extrinsic rewards when applying new skills and knowledge	.	.490	.240	.218	0.99
3	QI has higher strategic priority than short-term financial gain	.	.549	.302	.272	0.96
4	People live up to high ethical standards	.	.605	.366	.329	0.92

[a] Dependent Variable: Employee Output Per Unit Time; N = 72

[b] Method: Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

Table 3. Beta Coefficients for Motivation to Learn During Training Regression Model

Model	Unstandardized Coefficients B	 Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	 VIF
(Constant)	2.169	0.640		3.389	.001		
Have influence over the things that determine how my work gets done	.349	0.095	.364	3.679	.000	.952	1.050
Receive extrinsic rewards when applying new S&K	.248	0.094	.282	2.632	.011	.813	1.230
QI has higher strategic priority than short-term financial gain	.337	0.103	.351	3.282	.002	.816	1.225
People live up to high ethical standards	.303	0.115	.288	2.629	.011	.776	1.289

essence, this finding confirms the earlier stated underlying assumption of this study and proves that training motivation is indeed also related to organizational variables that directly or indirectly affect employee or organizational performance. The fact that 24 out of the 30 significant correlations depicted in Table 1 pertained to the association between motivation to learn and the identified TQM and STS job and work environment variables, attests to the validity of this conclusion.

Another significant finding of this study is the identification of task autonomy as a more important predictor for training motivation than all 15 learning and training transfer variables incorporated in the study. Given that task autonomy has often been cited by scholars (French & Bell, 1995; Hackman & Oldham, 1980; Pasmore, 1988) as a predictor for job motivation as well, this finding exemplifies the point that training motivation and training effectiveness in general cannot be studied in isolation. Rather, researchers should view training as another performance improvement intervention which is directly or indirectly affected by all other systemic factors perceived to affect employee or organizational performance.

How does this Research Contributes to New Knowledge in HRD?

As stated in the introduction, several scholars have recognized that motivation to learn is critical for training effectiveness and that researchers need to identify the factors that foster such motivation. By taking a holistic approach to learning motivation, and thus identifying new variables in the broader work environment that can facilitate the learning process, this empirical study was be able to assist the HRD field in three ways: a) bridge some the research gaps with regard motivation to learn; b) significantly contribute new knowledge in an area which often directly affects the success of many HRD efforts; and c) assist learning organization theorists operationalize the work environment in terms of dimensions that are conducive to a learning environment. In terms of future research, this study has identified at least one new important predictor (task autonomy) for the motivation to learn construct. Given the small sample size associated with this study, however, the conduction of future research with regard to the examination of the relationship between task autonomy and motivation to learn will help determine the extent to which such an association is indeed an important one.

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Nonprofit Learning Organizations: Issues for Human Resource Development

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Nonprofit organizations (NPOs) play a significant social and economic role in our society, yet they are facing ever-increasing changes that impact their performance and survival. To cope with the changes and challenges they face and to achieve a high level of competence, NPOs, as well as for-profit organizations, must be learning organizations. A study of this issue revealed that there is a direct relationship between learning organization dimensions and resources and performance in NPOs. Findings support the need for HRD in NPOs, and point to the unique and specific concerns that might impact learning in the nonprofit sector.

Keywords: Nonprofit Learning Organization, Nonprofit Performance, Nonprofit human resources

The growing economic and social significance of nonprofit organizations (NPOs) in our country is widely discussed in literature (Hodgkinson, Weitzman, Abrahams, Crutchfield, & Stevenson, 1996; Drucker, 1990; Dees, 1998); Pappas, 1996). NPOs assume a vital share of the responsibility for meeting public needs that neither government nor business can meet. Statistics show that these organizations have expenses roughly equivalent to 6% of the nation's total economy (Wilbur, Finn, & Freeland, 1994), and are America's largest employer when you consider the total number of their workers and volunteers (Drucker, 1990).

While the role of NPOs is significant, so too are the challenges these organizations face. As discussed in the current literature (Dees, 1998; Hammack and Young 1993; Hodgkinson et al., 1996), these challenges include growing controversies and scrutiny, an increasing complexity of social issues, ever-increasing costs and diminished funding, particularly public funding, and competition from for-profit businesses and other nonprofits. These trends are creating more business-like NPOs. Funders, as well as the general public, expect efficiency of administration and effectiveness in service outcomes.

Nonprofit Learning Organizations

To achieve a high level of competence and cope with the changes and challenges they face, NPOs, as well as for-profit organizations, must be learning organizations (Garratt, 1987; Garvin, 1993; Marquardt, 1996, Senge, 1990; Watkins & Marsick, 1993, 1996). Learning organizations subscribe to an ongoing learning process that continually increases their capacity, both for change and performance. The learning is systemic and improves and empowers the organization, leading to a higher intent of service and education to a larger world. Yet time for learning and the formalization of human resource development (HRD) in these agencies is probably last on their agenda, due to heavy work loads (NPOs are labor-intensive), lack of funding, and weak internal systems and structures for doing so. One dilemma is that donors no longer simply give to an organization, but earmark dollars for a specific program. Money is intended to provide client services, with minimal amounts spent for operations or training. This can restrict the organization's initiative and ability for learning by their workers, let alone the funding for staff, even minimal, whose concerns focus on the development of their personnel. This problem is put in perspective when one considers that most NPOs are young and small, with limited internal structure to make HRD possible. Nearly seventy-five percent of all charitable 501(c)(3) organizations have been founded since 1970, and seventy-two percent of those organizations that filed IRS forms in 1993 had expenses of less than $500,000 (Hodgkinson et al., 1996).

Learning and Performance. Research with action plans must be developed to guide donors and constituents of NPOs toward new ways of thinking about funding and the importance of HRD in these organizations. NPOs cannot afford that funding for personnel development and training be seen as an unwarranted or unaffordable expense. One such way to do this is to relate learning to performance. Donors and the public in general want to know that the NPO is engaging their monies in ways that will increase performance. For NPOs, the performance bottom line is service and service outcomes, which may be reflected in financial performance, learning performance, and mission

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performance. A recent study (McHargue, 1999) shows that there is a direct relationship between learning organization dimensions and performance in NPOs.

The major objective of this study was to examine the relationships between learning organization dimensions and resources in performance in nonprofit 501(c)(3) human service organizations in the nation. To do this, the mission performance measures for nonprofit human service organizations were identified and made operational, and the financial and knowledge performance measures which have been developed and successfully studied in the for-profit sector (Watkins & Marsick, 1997a, *Dimensions of the Learning Organization Questionnaire*) were adapted for use in the nonprofit setting.

The conceptual model guiding the study is shown in Figure 1.

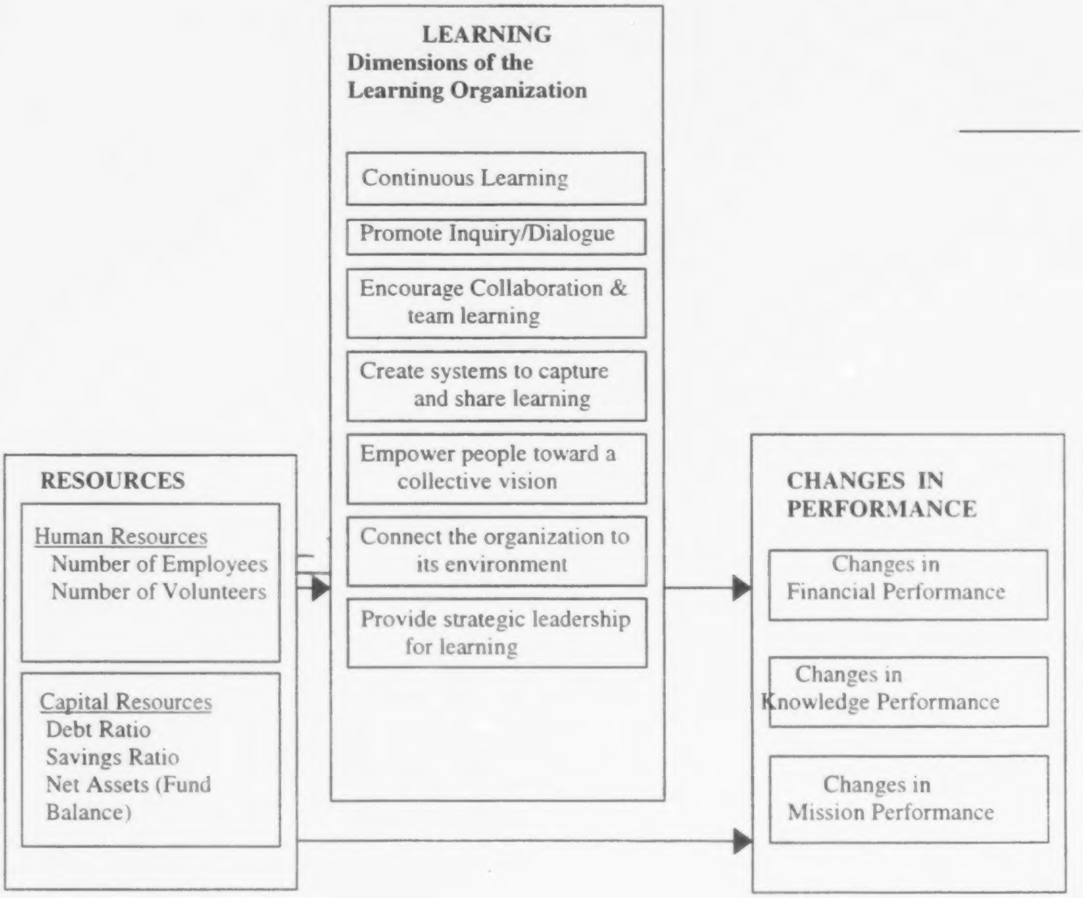

LEARNING
Dimensions of the Learning Organization
Continuous Learning
Promote Inquiry/Dialogue
Encourage Collaboration & team learning
Create systems to capture and share learning
Empower people toward a collective vision
Connect the organization to its environment
Provide strategic leadership for learning
RESOURCES
Human Resources
Number of Employees
Number of Volunteers
Capital Resources
Debt Ratio
Savings Ratio
Net Assets (Fund Balance)
CHANGES IN PERFORMANCE
Changes in Financial Performance
Changes in Knowledge Performance
Changes in Mission Performance

Figure 1
Conceptual Model Guiding the Study

The resource segment of the model is adapted from Lawler, Nadler, & Cammann's (1980) model of an organizational behavior system. Another model (Herman & Renz, 1997) from a study on health and welfare charities also identified some of the sample organization characteristics relating to organizational effectiveness. The learning organization behaviors in the conceptual model were taken from the theoretical framework for the study, Watkins and Marsick's *Sculpting the Learning Organization* (1993), and their edited book *In Action: Creating the learning organization* (1996).

We wanted to answer the following four questions: To what extent do learning organization dimensions independently explain observed variances in nonprofit performance? To what extent do select nonprofit organization characteristics independently explain observed variances in learning organization dimensions? To what extent do select nonprofit organization characteristics independently explain observed variances in nonprofit performance? To what extent can learning organization dimensions and select nonprofit organization characteristics jointly explain the observed variances in nonprofit performance?

The significance of the findings of this study for human resource developers is that they will be able to more effectively approach nonprofit learning and development. Even though the nonprofit sector is naïve about what it takes to invest in their paid staff or their volunteers (Pappas, 1996), there is an increasing need for ongoing education and training (Dees, 1998). The present study supports the theory that learning organization dimensions can be applied successfully in the nonprofit sector.

For-Profit to Nonprofit Issues

To better develop learning and to improve performance in NPOs, one must first understand the distinct differences and the similarities between this sector and for-profit organizations. Although Kerka (1995) stated that any type of organization can be a learning organization, there are differences as well as similarities between NPOs and for-profit organizations that should be noted and may impact the strategies for becoming a learning organization. Table 1 presents a compilation of some of the unique features of the NPO. While these characteristics are not true in every case, they are true enough to be considered a common distinction.

Table 1
A Comparison of Some Characteristics of Nonprofit and For-Profit Organizations

Source	Nonprofit Organization	For-Profit Organization
Drucker (1990)	•Source of money: donors	•Source of money: customer
	•Goal: service	•Goal: profit
	•Product: changed client	•Product: goods and services
	•Do not get paid for performance	•Customer pays for performance
	•A multitude of stakeholders	•The customer, employee and owner are stakeholders
	•Results are always outside the organization	•Results typically inside organization
	•Manage volunteer base	•Paid employees
Pappas (1996	•Driven by mission	•Driven by bottom line
	•Service is an end in itself	•Service is a strategy
	•Customers drain finances	•Customers provide finances
Keating and Keating (1980)	•Monopoly suppliers of services to a single market	•Competitive product market
	•Less reliance on financial rewards	•Greater reliance on financial rewards
Young (1983)	•Slower to respond to pressures of marketplace	•Driven to rapid response through lure of income
Anthony and Young (1990)	•Labor intensive	•Workflow dominated or paced by machinery
	•Services cannot be stored	•Goods can be stored in inventory
	•Difficult to measure quality of intangible services	•Tangible goods can be inspected before delivery
	•Less freedom of choice on goals and strategies	•Greater liberty to choose goals and strategies
	•Provide service as directed by an outside agency	•Service provision decided by management or board
	•Indirect link between finances and benefits	•Direct connection between product and revenue
	•New client could be seen as a drain on resources	•New client pursued for additional revenue

The difficulty some NPOs currently face is to work effectively within two distinct organizational frameworks: to think and act nonprofit and for-profit at the same time. In other words, NPOs compete in a volatile for-profit world to keep their services funded, and yet they must remain true to their nonprofit mission and constituents. They must market their services differently because they are selling something intangible to donor/customers who will not benefit directly from the product (Hammack and Young (1993).

Another distinct feature of the NPO is the wide diversity of its constituents. NPOs work with paid staff as well as volunteers, clients, boards, and donors. Hodgkinson and Weitzman (1992) report that volunteers provide the equivalent of nine million full-time employees to the nonprofit work force. Boards also provide unique governing functions in the NPO (Axelrod, 1994). The board of directors is usually made up of volunteers whose members come from differing backgrounds, rather than stockholders, professional managers, or government officials, as in business. Kanter and Summers (1987) suggest that the varying standards of clients, donors, and others in a NPO create organizational rigidities that make innovation and change difficult. Learning and personnel development may also be more challenging.

Method

Participants. The population of interest for this study was human service 501(c)(3) NPOs in the nation. Names and addresses for the study were generated from the Urban Institute's NCCS Core File, 1997 data base, the sampling frame for the study. This data is produced annually and is based on the 1997 IRS Form 990 Return Transaction File. A total of slightly over 6,000 organizations fit the sample characteristics: be in existence five years or more, and have a budget of $1 million or more. A survey was mailed to the leaders of 617 randomly selected organizations. A total of 264 NPOs who met the study criteria responded. The adjusted response rate was 44%, and is above the response range of 25% to 40% reported in other studies of NPOs. Of the participants, 73% held an executive position, 22% held an administrative position, 3% held a professional position, and 1% were hourly employees.

Analyses. Bivariate and exploratory multiple regression analyses were used to answer the four research questions.

Results

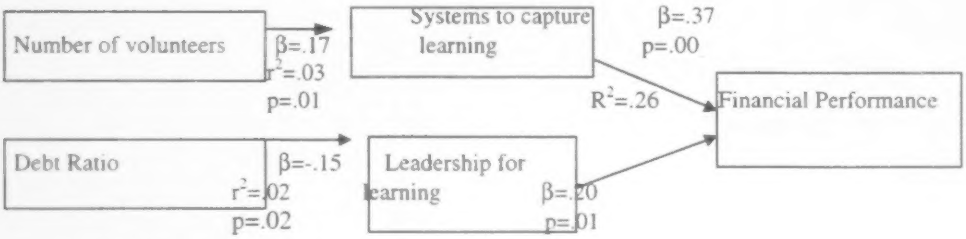
Question 1. To what extent do learning organization dimensions independently explain observed variances in nonprofit performance? O f the learning organization variables, *systems to capture learning* showed the strongest relationship with both *financial performance* $(\beta=.49)$ $(r^2=.24)$ and *knowledge performance* $(\beta=.47)(r^2=.22)$, while *continuous learning* $(\beta=.33)$ $(r^2=.11)$ showed the strongest relationship with *mission performance*.

Question 2. To what extent do select nonprofit organization characteristics independently explain observed variances in learning organization dimensions? One organization characteristic, *debt ratio*, predicted more of the *learning organization* variables than either *human resources* or the other capital resources *of net assets* (*fund balance*) or *savings ratio*. The *debt ratio* was calculated to show the relationship of liabilities to assets. A negative showing is actually a positive outcome. *Debt ratio* showed a negative relationship with *continuous learning* $(\beta=-.13)$ (r2=.02), *systems to capture learning* $(\beta--.12)(\ r^2=.02)$, *connect to the environment* $(\beta=-.18)$ $r^2=.03)$ and *leadership for learning* $(\beta=-.15)(\ r^2=.02)$. The strongest relationship overall was between *connection to the environment* and *debt ratio* $(\beta=.18)$ $(r^2=.03)$. *Systems to capture learning* and *number of volunteers* $(\beta=.17)(r^2=.03)$ showed the second strongest relationship.

Question 3. To what extent do select nonprofit organization characteristics independently explain observed variances in nonprofit performance? Of the twenty-four possible relationships, only three were significant. Two of these, *debt ratio* to *knowledge performance* $(\beta=-.13)(\ r^2=.02)$ and *savings ratio* to *mission performance* $(\beta=-.15)$ $(r^2=.02)$ were significant at the $p<.05$ level. One relationship, *debt ratio* to *financial performance* $(\beta=-.17)(\ r^2=.03)$ was significant at the $p<.01$ level. Note that the *debt ratio* and *savings ratio* show a negative relationship. These calculations show the relationship of liabilities to assets (*debt ratio*) and surplus (the revenue less expenses) to expenses (*savings ratio*). As discussed above, a negative showing is actually a positive outcome. *Human resources* (*number of employees* and *number of volunteers*), as well as the *age of the organization* and *net assets* (*fund balances*) were not significantly related with any of the *performance measures*. In summary, of the *organizational characteristics*, *debt ratio* related most frequently and at the highest level with both *learning organization dimensions* and *performance measures*, specifically *financial performance* and *knowledge performance*. Four of the six resource variables (*employees, volunteers, age of organization,* and *net assets*) were not significantly related to *performance.*

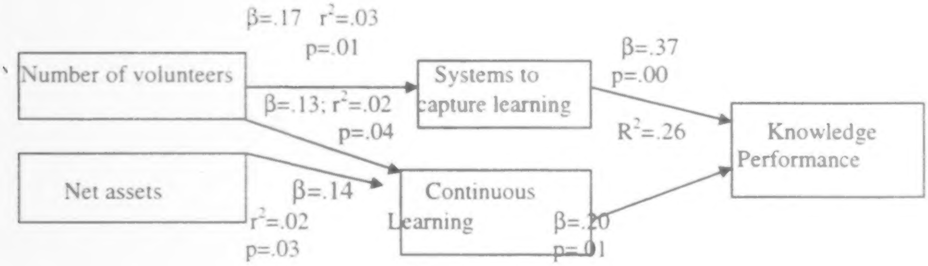
Question 4. To what extent can learning organization dimensions and select nonprofit organization characteristics jointly explain the observed variances in nonprofit performance? The findings resulted in three best performance models, as shown in Tables 2, 3, and 4 and Figures 2,3, and 4. The best *financial performance* model showed that when taken together, *number of volunteers* and *systems to capture learning* along with *debt ratio* and *leadership for learning* explained 26% of the variance in *financial performance*. The best *knowledge performance* model showed that when taken together, *number of volunteers* and *systems to capture learning* ,along with *number of volunteers, net assets* and *continuous learning* explained 26% of the variance in *knowledge performance*. The best *mission performance* model showed that *team learning* along with *number of volunteers* and *net assets* when taken together with *continuous learning*, and *savings ratio* explained 16% of the variance in *mission performance.*

Figure 2. Model for Financial Performance


Number of volunteers
β=.17
r²=.03
p=.01
Systems to capture learning
β=.37
p=.00
R²=.26
Financial Performance
Debt Ratio
β=-.15
r²=.02
p=.02
Leadership for learning
β=.20
p=.01

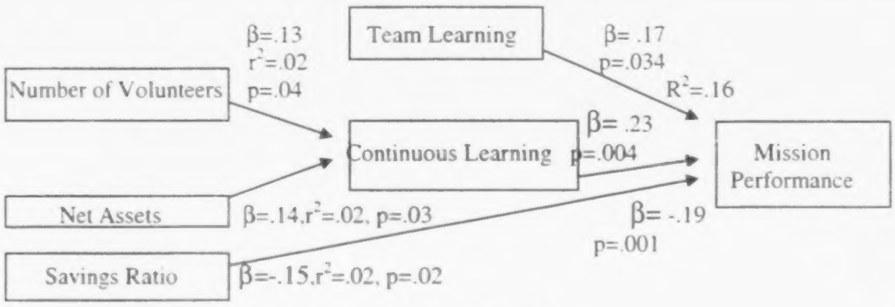
Note. Model Statistics: R^2=.26; $\underline{F}$=42.77; $\underline{p}$=.000; df=2

Figure 3. Model for Knowledge Performance


β=.17 r²=.03
p=.01
Number of volunteers
Systems to capture learning
β=.37
p=.00
β=.13; r²=.02
p=.04
R²=.26
Knowledge Performance
Net assets
β=.14
r²=.02
p=.03
Continuous Learning
β=.20
p=.01

Note. Model Statistics: R^2=.25; $\underline{F}$=40.59; $\underline{p}$=.00; df=2

Figure 4. Model for Mission Performance



Note. Model Statistics: R^2=.16; F=15.30; p=.000; df=3

Table 2

Composite "Best Model" for a Nonprofit Learning Organization

Organization Characteristics	Learning Dimensions	Levels of Learning	Performance
•High use of volunteers* •Low ratio of liabilities to assets, i.e., the organization is financially solvent (debt ratio) **•More assets than liabilities; available equity or fund balance (net assets)*** •Low ratio of surplus to expenses, i.e., the organization spends its money on services	•Provide strategic leadership for learning → **•Create systems to capture and share learning*** → •Encourage collaboration and team learning → **•Create continuous learning opportunities*** →	Global Organization Teams Individual	Financial Knowledge Mission

*Showed a more frequent relationship to performance
Note: Learning takes place at every level: individual, team, organization, and global

Discussion

The following principle conclusions are drawn from this study.

- *Embedded systems to capture and share learning* strongly predict the *financial and knowledge performance* in a NPO. This important learning dimension incorporates the use of two-way communication, easy and quick access to information, maintenance of an up-to-date profile of employee/volunteer skills, the creation and use of effective evaluation methods, sharing with employees and volunteers of lessons learned, and a monitoring of the results of the investments in learning. In other words, learning must not be left to chance or overlooked, but valued and integrated into the organization and the worklife of the employee. Openness in communication, enabling, and development for all is implied. The need for investment in technology and its significance to NPO performance is also shown in these findings. NPOs and their donors and stakeholders must not see this as "fluff" for their organization, but rather as vital to their existence. As mentioned earlier, donors earmark their monetary gifts for specific services and programs leaving little resources, if any, for equipment to administer the services. Challenges facing NPOs include securing outside funding for the development of both low and high tech systems for learning, and the creation of systems where there is no funding.

- As we move from the information era to the knowledge era, NPOs will need to focus more on human resource development. The NPO's mission of impacting and changing lives is best performed when the staff, on an individual basis, has time and resources to learn and is able to see day-to-day challenges as opportunities to learn. It is doubtful that NPOs can justify to their donors, above service to their clients, the need for HRD unless they can also show that it is profitable. This study confirms that financially efficient NPOs support individual learning in their organizations. To insure effective NPOs, it is important that consideration and encouragement be given by government and donors for these organizations to invest monies in their staff and not solely in their clients at the expense of significant organizational and staff needs.

- Learning and performance are higher in a NPO when the organization is *financially stable* and has sufficient and skilled ***human resources***, including employees and volunteers. NPOs exist in an environment of uncertainty that is difficult for them to control – Will funding allotments be cut? Will volunteers continue to help? Will employees leave for better paying jobs? Who or what will dictate our next services and programs? Can we determine our performance when so much of it depends upon outside stakeholders? If NPOs want to be learning organizations it will be important to strategically plan for a conducive environment for learning, i.e., where human and capital resources are adequate so that energies are not directed solely toward fundraising and services, but the NPO has time and resources to learn and continuously improve.

- *Leadership for learning* is critical to becoming a learning organization. Findings from this study show that this dimension, along with *systems to capture learning*, are most predictive of *financial performance*. Organizations can only become effective if the people who run them are capable of learning continuously and of giving direction and support for learning. While the learning process does not need to be expensive and can be performed with little cost, the leader's time is vital. This may be crucial because most NPOs are small with meager resources (Hodgkinson Weitzman, Abrahams, Crutchfield, & Stevenson, 1996).

- The use of *volunteers* is significant in the learning and the performance of a NPO. In terms of value, there are estimates that voluntary action in the nonprofit sector is at least on par with personal gifts of money and financial assets that these organizations receive (Brown, 1999). According to the findings from this study, volunteers keep a NPO close to their mission. However, the use of volunteers presents a unique management challenge to NPOs, who may work extensively with volunteers in achieving their mission. Many volunteers are with the organization short term, making it difficult for learning to be captured and shared and for any significant human resource development to take place.

Nearly three-fourths of all NPOs have been founded since 1970 (Hodgkinson et al., 1996). Many of these organizations have a short life span because they can not cope with the challenges they face. The possibility of market share is also shrinking with this proliferation. NPO leaders must prepare for increasing competition from other nonprofits. Learning organization dimensions provide the materials to do this. The successful organizations in this study identified skills they needed for future tasks, learned from past mistakes, brought the client into the decision-making process, considered employee morale in their decisions, and empowered others to achieve the organization's vision. They were also innovative in their new services. These NPOs and their leaders will be sought after to meet the needs of society. Leaders of nonprofits must aggressively develop these specific learning organization elements in their organizations, and be prepared to sacrifice to do so. NPOs that can learn and thereby improve their performance will not only impact their clients and their communities, but ultimately all of society.

Implications. HRD can profit from these findings as this field incorporates into their learning and development theory elements that are unique to NPOs. It is important to remember that while NPOs are like for-profit organizations in many ways, they are also unique. HRD can profit by playing to this uniqueness rather than trying to conform the NPOs to the practices of the business world. As we move from the information era to the knowledge era, NPOs will focus more on HRD and additional research will be needed. More HRD departments will be created in NPOs, and the demonstrated benefits in this study for adult learning on an individual, team, organizational, and societal level in NPOs will better inform development in the field.

Future Research. Future studies will need to focus on how to best design learning organizations in human service NPOs. It will also be important to learn how to do this where funding and time for learning is limited or non-existent.

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WORKING DRAFT
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Employee Perceptions of the Meaning of Empowerment

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This study explored the perceptions that non-supervisory employees have of the meaning of empowerment. Analysis of employee interviews resulted in the identification of five major themes; Impact, Competence, Autonomy, Meaning of Work, and Relationship with Supervisor, which work interdependently as aspects of empowerment. Employees identified everyday type activities as providing empowerment opportunities. Most experiences involved relationships with patients although the employee's' relationship with their supervisor was a key aspect to the subject's experience.

Keywords: Empowerment, Employees, Healthcare

Empowerment has become increasingly important to American businesses as it has been linked to employee creativeness (Walton, 1985), commitment (Yankelovitch, 1981), and independence (Berlew, 1986). There is a perception that empowerment of employees may provide a competitive advantage for those who do it well as it is seen as a mechanism to managing change and an approach toward improving the bottom line (Kizilos, 1990).

An emerging definition of empowerment is, "to enable." This implies that activities which enable an individual to act within a particular situation are empowering activities. The purpose of this study was to explore the perceptions that non-supervisory, medical professional employees have of the meaning of empowerment. Whereas much of the current literature focuses on management interventions to empower employees, very little research has been conducted to determine how employees perceive their own empowerment. Therefore, the major research question is, "What are non-supervisory, medical professional employees perceptions of the meaning of empowerment?" In seeking answers to this question the study will examine the empowered individual's perception of their own empowerment experience. The answer to the research question is significant as it can guide workers, managers and human resource professionals toward the creation of an empowered work force.

Recent work has proposed that empowerment is a multi-dimensional construct (Spreitzer, 1995; Thomas & Velthouse, 1990) having suggested that individuals may identify and interpret empowerment in various ways. Therefore, references to the empowerment construct are found in the psychological, social action and management literature.

According to Spreitzer (1995), psychological empowerment consists of four distinct dimensions; self-determination, competence, meaning and impact. Each dimension interacts with the other dimensions and contributes to the overall construct of an individual's psychological empowerment (Spreitzer, 1995; Kraimer & Seibert, 1997).

Self-determination has been equated to an individual's sense of choice and is used by Thomas & Velthouse (1990) who proposed a cognitive model of empowerment that focuses primarily on the choice individuals believe they have as well as the influence they experience. This creates a sense of "being enabled" which includes feeling able to perform competently, a sense of self efficacy (Bandura, 1977) and a perception of meaningfulness (Spreitzer, 1995; Fulford & Enz, 1995). In the general business literature autonomy is defined in terms of self-determination and individual choice (Deci & Ryan, 1985; Thomas & Velthouse 1990; Spreitzer, 1995). The basis for this arises from DeCharms' (1968) concept of locus of causality where the individual believes he or she is the origin of his or her own behavior. In health care, particularly nursing, autonomy references how nurses practice their craft. To be autonomous means to be able to make independent decisions and, to be accountable for those decisions. According to Collins & Henderson (1991) and Sabiston & Laschinger (1995) the pathway to autonomous nursing practice is built on the expert knowledge of the practitioner. Therefore, if the nurse has the appropriate knowledge and skill to initiate action, carry out action and, to be responsible for the result, then she is practicing autonomously (Collins & Henderson, 1991). Defining autonomy in this way suggests self-determination and competence are components of

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autonomy. Dwyer, Schwartz & Fox (1992) discovered in their study of 151 nurses that they differed in their need for autonomy. As that difference emerged, the type of support needed from management changed. Those who needed more autonomy tended to desire less direction from management while those who had a lower need for autonomy needed more management direction.

Chandler (1992) conducted a study in which she interviewed 56 nurses asking them to describe both a situation in which they felt empowered and one in which they felt powerless. After the interviews were recorded and transcribed a content analysis was performed that identified themes. Of the fifty-six nurses interviewed, fifty-seven percent reported being empowered by their interactions with patients and families. The interactions included their professional duties of assessment, intervention, changing, and responding. These duties included activities such as teaching, supporting, comforting and advocating. In addition, twenty-three percent of the respondents reported empowerment when interacting with the physician in a collaborative manner. Therefore, eighty percent of the subjects found being involved in a significant relationship as an experience where they felt empowered. Other empowerment experiences were working as a team, being complemented by the nurse manager and feeling good about being a nurse. The largest source of powerlessness was from a negative interaction with the physician

DeCharms (1968) has indicated that individuals need to feel as though they are personally competent in their environment. Competence, as defined by Gist (1987), is the belief that one has the skills and abilities needed to perform the job. They gain this competence through the acquisition of knowledge and, by mastering skills. According to Kieffer (1984), competence is a product of experience and subsequent reflection. Kieffer referred to this relationship between experience and reflection as praxis and stated that it brings forth new understandings which results in more effective actions. Although individuals may become more competent through various experiences, Rappaport (1984) posited that empowerment implies an individual is already competent and will use that competence given the opportunity. In this sense competence may be viewed as a precursor to empowerment.

Meaning is another of Spreitzer's (1995) dimensions of empowerment. Brief & Nord (1990) have stated that "meaning is defined as a fit between the requirements of the job tasks and one's own values, beliefs, and behaviors." Therefore, a worker's motivation is most likely to occur when the value of the work activity is seen as positive and when the expectation exists that the behaviors implemented will result in the desired outcome (Kleiber & Maehr, 1985). Shamir (1991) has stated that a task could motivate an individual, even in the absence of any rewards, because it has meaning for them while Thomas & Velthouse (1990) have related meaning to the intrinsic caring about a given task and have indicated that a person whose work is meaningful is likely to be empowered by the work.

According to Ashforth (1989) and Spreitzer (1996), impact is a belief that an individual has about their own ability to have significant influence over outcomes at work. It is also a key to psychological empowerment. Important to the understanding of impact is the notion that the individual is aware of the influence their actions have had on work activities (Kraimer & Seibert, 1997). However, the ability to have impact is related to having access to the sources of empowerment (Sabiston & Laschinger, 1995). According to Sabiston & Laschinger those sources are support, information, resources and opportunities. Therefore, impact is identified as only one aspect of empowerment which must be integrated with others to be fully meaningful.

The social action and community psychology literature has explored many of the same elements identified in psychological empowerment but does so in the context of community groups and social needs. This research serves as a bridge between psychological empowerment and managerial empowerment emphasizing peer support and empowerment in a group setting. In the community setting empowerment has been viewed as the "mechanism by which people, organizations and communities gain mastery over their lives," (Rappaport, 1984) implying that individuals possess and can develop the skills necessary to become empowered. Kieffer's (1984) study supported this having illustrated the development of 15 individuals from powerless to being empowered. Rappaport suggested that empowerment is different for different people in different settings and though it may be the result of some purposeful program it is more likely to be found when true collaboration occurs among professionals and the beneficiaries of their interventions. His assertions were supported by Corsun & Enz (1997) as they studied empowerment within an organizational context. They saw the relationship between the dimensions of empowerment (meaning, self-efficacy and competence) and peer helping behaviors and, also asserted that formal empowerment attempts by an organization might fail because the organization has not created a "relationship-based", supportive and caring work environment" for the employee.

Cousun & Enz's work is illustrative of the research that comprises the work on leadership, management and organizations. Within this body of literature are the actions and structures of the work place that either nurture or limit the individual's ability to be empowered. Burns (1978) viewed empowering managers as those who activate and mobilize subordinates. Kouzes & Posner (1995) identified this as "enabling others to act," and Sashkin (1982) labeled it as participative management. According to Sashkin, this participation can take various forms including:

participation in goal setting, decision making, problem solving and change. All forms involve some sharing of power that creates conditions for empowerment (Burke, 1986). As a part of sharing power Burke stated that empowerment should come from a person's involvement in significant and relevant tasks.

Likewise, Kouzes and Posner (1995) wrote that *"feeling powerful - literally feeling "able" -comes from a deep sense of being in control of our own lives.* Any leadership practice that increases another's sense of self-confidence, self-determination, and personal effectiveness makes that person more powerful and greatly enhances the possibility of success."

Empowering leaders may also provide information to individuals. One illustration of this is provided in a quote from a manager interviewed by Kouzes and Posner (1995) who said, "If I had to tell you in one sentence why I am motivated by my job, it is because when I know what is going on, and how I fit into the overall picture, it makes me feel important." According to Kouzes and Posner (1995), "without information, people won't extend themselves to take responsibility; armed with information, people's creative energies can be harnessed to achieve extraordinary results. Information empowers people, strengthening their resolve and providing them with the resources they need to be successful."

Kouzes and Posner (1995) also indicated that leaders influence individual workers negatively by exerting too much control. They stated that "the most insidious thing about external control is that it actually erodes the intrinsic motivation that a person might have for a task," (p. 181). According to Mainiero (1986), "individuals in highly dependent or powerless jobs are more likely to give up than individuals in powerful jobs." Lorsch (1970) stated that jobs should be divided to give the individual meaningful work over which he or she can have some feeling of control and influence. Kanter's (1993) theory suggested that work behaviors and attitudes are partially the result of the individual's position within the organization as well as the situations that the individual faces. She stressed the importance of these workplace factors and de-emphasized the importance of the individual's personality and upbringing. Kanter further indicated that power is the result of the individual being able to access and mobilize certain empowerment structures including support, information, resources and opportunities. This theory was supported when Sabiston & Laschinger (1995) found that nurses perceived that they had a moderate degree of job-related empowerment and a moderate degree of access to those four empowerment structures indicating a correlation between the two.

The purpose of this study was to explore non-supervisory, medical professional employee perceptions of the meaning of empowerment. Therefore the research method was an exploratory, phenomenological design. Data was collected through in-depth individual interviews. Three sites, all not-for-profit hospitals, were chosen in which to conduct the study. Since the researcher is an insider at one site, that site was chosen for a pilot study as well as one of the three main study sites. Two other sites that are in close proximity and, similar in size to the first site were also chosen for the study. The similarity in regard to type of business and location was important in order to reduce variations in tasks and geographical differences. Additionally, the researcher had greater opportunities for entry into those sites and therefore the cost of the study was kept within budgetary constraints.

Permission to conduct the study was first obtained from the sites. Each site preferred a different method of introducing the study to its employees. One site designated an internal person to coordinate the effort with the researcher. A second site announced the study through its organization's newsletter and communication to its managers and a third site solicited a manager's help directly. Since the research purpose was to explore the perceptions that non-supervisory, medical professions have of the meaning of empowerment it was important to identify potential interviewees who had some experience, by their own definition, with empowerment. Having the potential interviewees self-select into the study ensured an experience of empowerment and a willingness to discuss that experience. Therefore, all of the potential interviewees who indentified an interest in the study were selected to participate in an interview regardless of how they personally defined empowerment. The objective of this study was to explore their own individual perceptions of empowerment not necessarily to explore similar perceptions. The potential interviewees responded directly to the researcher. Letters introducing the study, the researcher and the requirements of the study and the confidentiality with which the interview would be conducted were then sent to them. Each interview was audiotaped and later transcribed. Each interview was held privately and each interviewee was asked to describe in detail a work situation where she felt empowered.

For the purpose of this study a non-management medical professional was defined as an individual who had no direct responsibility for the performance appraisal of another worker and, is employed in a position that requires a professional license or certification. A pilot study was conducted with three individuals from one of the three sites. Four employees from each of the three sites were then interviewed as part of the main study for a total of fifteen individuals interviewed. Although the study was open to all non-supervisory medical professionals, eleven of the twelve main study interviewees were nurses.

The written transcripts of the interviews were analyzed using Giorgi's (1985) model. This included an initial reading of the transcript to gain an overall sense of the entire interview and, a second reading to note major themes or main ideas. Once recurrent themes had been identified, the interview tapes were listened to again to determine if the language used, voice inflections, pauses, etc., held significance for the meaning extracted from the text. The transcript was read a third time to place meanings gained from the tape into the text. An essay reflecting the interviewee's perspective was then constructed. A copy of the actual transcript and essay were given to the interviewee for review and, the final essays were reviewed by an independent third party reviewer who had experience in the health care field for the purpose of reducing bias, confirming results and validating the themes.

In examining the transcripts and essays of all of the interviewees, five major themes emerged. Those themes were: Impact, Competence, Autonomy, Meaning of Work and, Supervisory Relationship. Impact concerns the notion that the individual is aware of the influence their actions have on work activities. In this study the interviewees indicated that having an impact was important to their empowerment experience. They talked about "making a difference" in the lives of patients and families. A key aspect of this theme was that the impact that was made did not have to be one of great overall significance. The interviewees related stories of keeping the patient from feeling pain, making the patient's day a little bit better or, teaching the patient about their disease process. One interviewee, Kristine, described her impact like this; "...the next day when I gave her the big bath and I did her fingernails there was the biggest smile and the tear out of her eye that made me feel like 'yes,' I did something for this person that made a difference. Even though it's something little, it made a difference to them. And the family, they were just like "Oh!"...all crying, and it's going to make me cry!" For the organization these situations appear to be of minor importance when compared with major budgetary or medical decisions. For the caregiver, instances like these were successful interventions that contributed to their feelings of empowerment.

A second theme, competence, was also identified. In this study competence consisted of the knowledge, skills, abilities and confidence needed to perform required work. Interviewees in this study indicated that they already possessed the knowledge needed to perform the job prior to their experience of empowerment although some did indicate that they also gained knowledge from the empowerment experience itself. This knowledge and overall competence was obtained primarily from their professional training and their prior experiences on the job. Prior experiences were identified as being very important by interviewees who worked on shifts in which there was no supervisor present. These experiences allowed them to make informed decisions when there was no supervisor available with which to confer. The interviewees indicated that conversations with supervisors reinforced their confidence in their skills and knowledge, which prompted them to continue with their experience.

The process of self-reflection was identified by half of the interviewees as having occurred during or after the noted experience and accounted for an increase in knowledge, skill or confidence. According to the literature, the process of reflection is central to adult learning (Jarvis, 1987; Kieffer, 1984). One nurse, in reflecting on a devastating moment during her empowerment experience, stated, "I have failed! But then you reevaluate the situation and, OK, what's really going on here? And then, what do I need to do? What's my plan? And then set some goals. It's just a never ending circle of reevaluation."

Autonomy was identified as a third theme of this study. Autonomy is related to having the permission to act, in most cases, on the behalf of the patient. Each interviewee in this study believed that they had a certain amount of freedom to act while in the situation they described as their experience of empowerment. For some, the autonomy they experienced was a condition which was granted to them by their supervisor, their position in the organization and, by their professional license. Likewise, feeling responsible for the patient and certain activities related to the care of the patient were embedded in the job itself and the professional license. One nurse indicated how a sense of responsibility flows from her license and position as a registered nurse: "I think that is the job of a registered nurse. Different people have different feelings about where their responsibility ends and that kind of thing but I think that you know, as his nurse, it was my responsibility. It was just mine because he was my patient for the evening. Just the ethical code that I took on when I became a nurse." A license or an otherwise clearly defined role in which authority is granted may provide what is needed for a person to operate autonomously.

As with responsibility, willingness to initiate action also appeared as a sub-set to this theme of autonomy. Half of the interviewees indicated they initiated action in their empowerment experience while the remaining half indicated that their supervisors had initiated the first contact with them which allowed them to initiate other actions to continue with the experience.

A fourth theme identified in this study was that of Meaning of Work. This is best explained by one of the interviewees who stated, "This is going to be my life time work. It's rewarding for me that I know that during that eight hour shift I made a difference. Nothing major. I don't think in terms of big rewards or major life changing events.... But I know, for that night and maybe he was just more comfortable the next day. I know for myself that

I've made a difference with my patients and I think that's what helps me enjoy my job." For the majority of the interviewees, achieving results that related to making someone else's life better is what made their work meaningful and indicates why they had such a high level of commitment. It was evident within the study that the interviewees personal values played a role in how they attributed meaning to their empowerment experience as the activities they were engaged in; teaching, supporting, comforting and advocating had personal importance to them. For some, those activities were expressly related to issues they had dealt with earlier in their lives. One nurse specifically indicated how empowered she became when she taught others, relating that situation to her own difficulties as a learning disabled child.

The terms "accountable" and "responsible" were used by the interviewees when talking about meaning. Each felt as though they were personally accountable and responsible for the task they were performing at that time and, to not accomplish it was not acceptable. This meant working through obstacles and taking risks that they might not have otherwise taken. The nurses in the study referred to their nursing license and their own definition of what it means to be a nurse as indications of their commitment to, what they perceived, as their responsibility.

The final theme identified in this study was that of Supervisor Relationship. Supervisors were involved in the interviewee's empowerment experiences at different levels. For some, their supervisor initiated the action that involved the interviewee in the experience. For others, their supervisor was used as a confidant and advisor; a person they went to when they engaged an obstacle or were less certain of the appropriate approach to take. However, for most of the interviewees the supervisor was not directly involved in the experience of empowerment at all. Regardless, the relationship that existed between the interviewees and their supervisor was important to them. The interviewees attributed some of their ability to proceed through their empowerment activity to the "trusting" relationship they believed existed between them and their supervisor. Their ability to move forward was due in part to the belief they had that their supervisor would support their efforts. This belief had been formed from previous situations in which the individuals felt they had received some sort of support. The relationship with their supervisor was also important for the individuals who had actually communicated with their supervisor at a point within the activity. One of the interviewees indicated that had she not received support from her supervisor than she most likely would have not pursued the issue that led to her experience of empowerment. She stated that her supervisor allowed her to blow "off a little steam," listened to her account of the situation and then indicated her agreement with the interviewee's assessment of the situation.

Empowerment is often conceived as a delegation of power or a program initiated by management which allows employees the opportunity to participate in problem solving not usually recognized as a part of the employee's regular job duties. For the majority of individuals in this study empowerment was not the result of any specific management action. Instead, it was comprised of a number of themes, which worked in unison to provide the feeling of empowerment. Any of the themes may have been the focus of the empowerment discussion for any one of the individual interviewees but each described a situation that was multidimensional in regard to empowerment themes. Additionally, these themes came together, not during an extraordinary event but, during typical daily events that could conceivably occur a number of times within a normal work day. As such, they were centered on relationships between the care givers and their patients. These relationships, and the responsibility that was felt for the well-being of the patient, provided much of the meaning for the interviewees in this study. This was a finding of Chandler's (1992) study as well. Sometimes the relationship was an interactive one where the care givers communication with, and treatment of, the patient was the major activity and sometimes it was the care givers concern over the patient's well-being that lead to an intervention on the patient's behalf. In addition, the role of the supervisor in the empowerment process was described in this study as a relationship of trust. This relationship, for all interviewees, had been built over time prior to the empowerment experience and, had assisted the individual in proceeding with the activities of the experience regardless of the supervisors absence or presence during the actual empowerment experience.

These different aspects of empowerment and the relationship between them further support previous theories of empowerment being a multidimensional construct. Additionally, this study furthers the theory by including the importance of the supervisory aspect as part of an overall construct of empowerment.

The results of this study have implications for the health care industry, business leaders and HRD professionals. H.R.D. professionals are often contracted with to help build teams within organizations. Traditionally, team building includes the creation of trusting relationships. The results of this study support the importance of trust between employee and supervisor as a key aspect of empowerment. The building of trust appears to allow for both employee and supervisor initiated experiences, which lead to empowerment. Trust also appears to allow empowering situations to emerge from everyday work activities as individuals will proceed with empowering activities in the absence of permission from their supervisor when they perceive the relationship between them and their supervisor is a trusting one. In helping supervisors develop empowerment activities, HRD professionals should first look at the level of trust that exists between the supervisor and those employees reporting to him or her. Teaching supervisors to develop trusting relationships is a key step toward empowerment. Absence of a trusting relationship may be enough to keep individuals from engaging in activities that are empowering.

In addition to building trust, supervisors need to learn about and develop their skill at providing support to employees. This may be providing the employee with permission to pursue an activity that is a part of their responsibility but one where the employee is not taking initiative because of perceived constraints. Being able to encourage and, knowing how to give permission to act are examples of support that relate to acts of empowerment.

Operations managers also will call upon HRD professionals to assist with job evaluation, productivity improvements and change initiatives. Professionals should be aware that, in accordance with the results of this study, changes in job tasks that take the employee away from their core work may also result in missed opportunities for empowerment as this study concluded employees were likely to find empowerment in everyday work situations. Additionally, managers should exercise caution in pulling employees away from daily work duties if those duties are the core of the job and, if the employee has pursued that profession because of the meaning those duties provide. Even different tasks that may seem empowering to the manager may be construed by the employee as an interruption or inconvenience to them as it takes them away from a task that is meaningful. Jobs and job duties that an employee currently perceives as empowering must be replaced with other empowering work if changes need to be made. HRD professionals should be able to alert supervisors to these needs and offer suggestions on suitable options.

Similarly, HRD professionals are often asked to participate in or lead the organization in empowerment efforts with the expectation that a program will be constructed which empowers employees through the use of methods such as committee involvement and increased departmental responsibilities. However, attempts to empower employees by taking them away from their source of meaning with the lure of greater responsibility may actually be disempowering. Therefore, an organization may consider replacing empowerment programs with organizational wide empowerment initiatives.

In regard to the training needs of employees, the results of this study indicate that autonomy in work is partially a function of expert knowledge. This suggests that employees may need certain training and education prior to being able to utilize the experiences in the job that are naturally empowering. It also suggests that any training or education that adds to a base of expert knowledge may have a benefit in future experiences of empowerment. Whereas specific job training may have an immediate use, training and education that increases expert knowledge may eventually produce benefits in regard to increased confidence and a willingness to act which in turn may lead to empowering actions.

This study also has implications for the Health Care Industry and supervisors in general. One major implication is the importance of the relationship between the professional caregiver and the patient. The empowerment of patient care staff is more likely to occur when the relationship between the employee and the patient is allowed to develop. Any activity that pulls the employee away from the patient potentially lessens the opportunities to be empowered. Understanding what is meaningful to workers and allowing them to participate in meaningful work is important. For many medical professionals, meaning is found within the core work of their chosen profession. The interviewees of this study defined that meaning most often as "helping others."

By illustrating the importance and relationship of supervisor contributions to employee empowerment this study furthers the knowledge of the empowerment construct. Aspects of trust and support provided by the supervisor prior to the empowerment experience become an integral part of whether or not an individual will experience empowerment in the work setting. While the concept of trust is not new, the results of this study suggest that it is vital to the empowerment of the individual if they are to be able to engage in the kinds of activities that bring about the empowerment experience. This also supports the notion that empowerment is dependent on other, well performed, leadership practices and cannot be implemented as a separate organizational activity.

Whereas empowerment has often been viewed as the result of specific organizational programming or the provision of an extraordinary opportunity afforded an employee who rose to the occasion creating an often-dramatic result, this study shows that empowerment is readily available to the typical employee while engaged in the more ordinary tasks of the job. This moves our understanding of empowerment from the concept of a specialized effort to one of an opportunity that is constantly available.

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Analyzing HRD Through Metaphor: Why, how, and Some Likely Findings

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Metaphors can be viewed as central to the task of accounting for how we think about things, make sense of reality, and set the problems we try to solve. What then does the uses of metaphor in HRD say about how those in the field view the world, and how might that view be limiting? This article contains an argument for completing an analysis of HRD metaphor, a framework for that analysis, and examples of what might be discovered.

Keyword: Metaphors

Justifying a metaphor analysis of HRD

HRD as a three-legged stool, an octopus, a centipede, a clover leaf? Organizations with memory, identity, culture, and an ability to learn? Researchers using narrative portraits, path analysis, grand tour questions, and pilot studies? Practitioners with career anchors and psychological contracts who run canned training, environment scans, and brainstorming sessions? There is little doubting that when it comes to the language of HRD, metaphors abound. But, what do these metaphors tell us about HRD, how can we use them to our advantage, and in what ways might they be dangerous for the field?

One tradition in metaphor treats it as being central to the task of accounting for our perspectives on the world: how we think about things, make sense of reality, and set the problems we later try to solve (Schön, 1993); and also helping to constitute that reality and prescribing how it ought to be viewed and evaluated (Tsoukas, 1991). In HRD, it is likely that we operate totally unaware of the influence of metaphors, for often they are so deeply embedded in our daily language that we are blinded to their effect on our thinking and behavior (Kendall & Kendall, 1993). However, once identified and made explicit, the appropriateness of metaphors can be questioned, and new metaphors can be explored to create a new reality, a new understanding of experience, and a new meaning to pasts, daily activities, and what is known and believed (Lakoff & Johnson, 1980).

Inns (1996) argued that metaphor analyses could be applied to fields of study and such analyses have already been completed for psychology (Leary, 1990) and organizations (Morgan, 1997). What then if a metaphor analysis was completed on HRD; what might it find? It could conceivably identify how certain metaphors influence how we view reality, how we conceive of issues, how we design our approaches, and how we behave in certain situations. Making those metaphors explicit would allow for a dialogue on their appropriateness and how they help or hinder the field. It would also allow for an exploration of alternative metaphors; the potential outcome being greater awareness of what underpins our actions, of the alternatives available to us, and of new metaphors to orient future behavior.

In this article, I outline the arguments for completing a metaphor analysis for HRD, offer a framework for that analysis, and offer examples of what might be discovered. I also explore the potential benefits to the field of those findings. The paper is structured so that readers are first introduced to metaphor theory and then metaphors from other disciplines, before I describe three approaches to exploring metaphor in HRD.

Metaphors: definitions and impact

Metaphors can be traced back centuries, at least as far as Aristotle circa 330 BC (Leary, 1990). They work by forging an equivalence of identity between separate elements of experience in a way that encourages us to understand what is common. Through assertions that subject A is, or is like, B, the processes of comparison, substitution, and interaction between the images of A and B act as generators of new meaning (Morgan, 1980), as well as organizers of perception (Barrett & Cooperrider, 1990). Social sciences metaphors typically work by structuring inherently

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vaguer concepts in terms of more concrete concepts (Tsoukas, 1991), and are most powerful when the differences between the subjects or concepts are significant but with some areas of overlap (Morgan, 1980).

Despite the long history of metaphor, there remains considerable disagreement about their significance: something reflected by the over 125 definitions of metaphor discovered by Soskice in 1985 (Leary, 1990). There exists a long-running debate on whether metaphors are anything other than a literary tool. On one side, metaphor is regarded as a figure of speech of primarily aesthetic value, and therefore as no more than a literary and descriptive device for embellishment. However, another tradition (and the one I focus on in this article) treats metaphors as being central to the task of accounting for our perspectives on the world (Schön, 1993), and as the cognitive lenses used to make sense of and shape our reality (Kendall & Kendall, 1993). The full nature of the debate between the two views of metaphor is beyond the scope of this article, however it is important when interpreting the remainder of the article to note that these differing views exist.

Where metaphors are viewed as being more than linguistic tools, they are considered as describing an external reality, and helping to constitute that reality and prescribe how it ought to be viewed and evaluated (Tsoukas, 1991, p. 570). As Lakoff and Johnson (1980) argued, we do not just use metaphorical language, but we also use metaphors to structure, understand, talk about, and perform. That view was supported by the results of a study by Sapienza (Sackmann, 1989), which found that metaphorical language influences not only perceptions, but also subsequent actions.

The potential impact metaphors have on our behavior brings to the fore the importance of exploring those we use and highlights the potentials for influencing behavior by changing metaphors. The issue-at-hand is what subjects are used in the metaphors, what relationship is asserted, how do the subjects and asserted relationship influence behavior, and what alternative subjects and asserted relationships could lead to more beneficial behaviors? Schön (1993) described this a "process by which new perspectives on the world come into existence" (p. 137). As Lakoff and Johnson (1980) described,

"new metaphors have the power to create a new reality... If a new metaphor enters the conceptual system that we base our actions on, it will alter that conceptual system and the perceptions and actions that the system gives rise to" (Lakoff & Johnson, 1980, p. 145).

Lakoff and Johnson placed particular emphasis on the potential for achieving changes to conceptual systems by introducing new imaginative and creative metaphors. Such metaphors, they argued, "are capable of giving us a new understanding of our experience. Thus, they can give new meaning to our pasts, to our daily activities, and to what we know and believe" (Lakoff & Johnson, 1980, p.130).

Metaphors from other disciplines

Given the significance of metaphor in framing realities and in creating new meaning perspectives, metaphors offer a potential route to explore the realities of groups. Inns (1996) argued that metaphorical analyses could be applied to a field of study, and used to reveal core values and assumptions, trace a field's progression and emerging philosophies, and explore more appropriate alternative frameworks. Such an approach has already been taken by Kendall and Kendall (1993) with information systems, by Dunn (1990) with Human Resource Management, and by Leary (1990) with psychology. However, the analysis of metaphors for organizations has come closest to studying metaphors in HRD, albeit by studying those applicable to Organization Development rather than training.

Using metaphors to describe organizations has a long history. For example, when Brigham Young led the Mormons to Utah, he described their organization as a beehive: everyone working hard in an orderly fashion and not questioning the authority of the church hierarchy (Brink, 1993). This is but one of many metaphors applicable to modern organizations, each constituting and capturing the nature of organizational life in different ways and offering powerful, distinctive, but essentially partial insights (Morgan, 1980). Some include: organizations as machines, organisms, psychic prisons, ecological systems, theaters, instruments of domination, garbage cans, icebergs, and soap bubbles.

As well as exploring metaphors for whole organizations, metaphorical terms are also commonly found to describe organizational issues or are common in language about organizations. Examples include: organizational culture; drivers of change; vision and mission; organizational memory; re-engineering organizations; and learning organizations. Some of these are good examples of 'dead metaphors,' that is statements that were once obviously metaphorical but which have since, through regular usage, become accepted in their own non-metaphorical 'right.'

There is also evidence of metaphors being used in organizational change to diagnose and transform organizations. Morgan (1980), for example, described the use of metaphor both as a supplementary and contradictory approach to organizational analysis: and Armenakis and Bedeian (1992) described the advantage of change agents using metaphor to arrive at problem diagnoses and solutions rapidly. Other examples include: understanding organizations by listening to the metaphors given by customers, employees, and other stakeholders (Brink, 1993), and analyzing metaphors to shed light on underlying assumptions that affect surface organizational behavior (Conrad, cited in Cleary & Packard, 1992). Perhaps the most famous example of metaphor in organizational change is that of Lewin's 'unfreezing-change-refreezing.'

On transformation, Sackmann (1989) hypothesized that metaphors can influence employees' thinking, feelings, and their construction of reality in ways that facilitate organizational transformation. Specifically, Keizer and Post (1996) described using metaphoric gaps as catalysts of change; Morgan (1986) offered eight metaphors, suggesting different interventions as being appropriate for each; and Palmer and Dunford (1996) described fifteen common organizational metaphors and referred to their use in strategic planning, structural change, organization development, organizational culture, and organizational change.

A framework for exploring metaphor in HRD

Given Inns' (1996) assertion that metaphorical analyses could be applied to a field of study, what then if we applied that to the field of HRD? Brink (1993) identified three applications of metaphor to better understand organizations: explore metaphors used by employees, customers, and other stakeholders; explore how metaphor is, and can be, used to describe the organization to outsiders; and encourage the formulation of new metaphors that might facilitate change. These could be usefully re-phrased to structure the three-way exploration of metaphors in HRD in the following sections:

- identifying what current metaphor usage (from its many sources) tells us about the field of HRD;
- identifying how metaphor is used, or can be used, to describe the field of HRD; and
- identifying how new perspectives for the HRD field can be generated using metaphor.

Data collection

Several data collection methods have been suggested to explore metaphors which could be used in addressing these three bullets, including: interviews and focus groups (Kendall & Kendall, 1993); reviewing documents and records of employee discussions (Kock & Deetz, in Cleary & Packard, 1992); observing symbols, objects, facilities, and language with an eye toward metaphorical content (Cleary & Packard, 1992); and participant observation (Brink, 1993). In each case, the methods are qualitative and each author used multiple collection methods. Various analysis methods have also been used, including: Q-methodology (Kendall & Kendall, 1993), and theme-identification (Cleary & Packard, 1992).

Applying those methods to identifying metaphors in HRD suggests such approaches as:

- interviews or focus groups with various stakeholder groupings (HRD practitioners, educators, researchers, students, clients);
- reviewing printed materials (e.g. books and magazines for practitioners, academic texts and journals, research conference papers, and organization HRD strategy documents);
- observation (e.g. at training and consultancy sessions run by practitioners, HRD education classes, meetings of academic and practitioner groups); and
- case studies of educational, research, and practitioner-based settings.

Identifying current metaphor usage in HRD research, practice, and education

There are three primary areas of focus for the identification of metaphors used in HRD: research, practice, and education.

Metaphor in HRD research

Regardless of the discipline, there are many metaphors contained in the language of research methods and analysis. Examples taken from recent HRD literature include: stream of research, narrative portraits, path analysis, hybrid designs, key questions and themes, grand tour questions, triangulation of data sources, and pilot studies.

However, of potentially greater interest to those in HRD is the use of metaphors in research, with recent examples including:

- to introduce an area of research - Frantz (1998) used the image of a football team quarterback when introducing research into the decision-making process leaders go through in 'calling audibles;'
- for data collection - Scanlon (1999), in researching the voluntary sector, asked focus group participants to describe metaphors for the volunteer climate;
- as data given by research participants - Bierema (1999), after studying women executives, reported a particular recurring metaphor offered by those interviewed; and
- in data validation - Ardishvili (1999), after interviewing independent HRD consultants, validated the preliminary results by sharing a summary of emerging themes and metaphors with interviewees.

Metaphor in HRD practice

As already noted, several authors have explored the use of metaphors by practitioners to diagnose and transform organizations, and described the role of metaphors as a communication tool in organizational changes. However, little has been published about the specific usage of metaphors by HRD practitioners or to describe practice. Such an analysis could identify: what metaphors-in-use say about the core values and assumptions of people in HRD; where those in the field may have become blinkered by operating under unquestioned metaphors; and what alternative metaphors exist and their impact on behavior.

The purpose of this article is to argue the case for a research agenda on metaphors rather than to present research findings, however let me list just a sample of metaphors from recently published HRD articles:

- Metaphors for how HRD works: as a strategically important *partner*; through strategic *interventions*; by *harnessing* workplace learning;
- Metaphors for what HRD seeks: *alignment* in organizations; *unleashing* of human expertise; *root* causes of problems;
- Metaphors for HRD concerns: *fad driven* HRD and *blind application* of interventions; *canned* training; *mechanical adherence* to good practice;
- Metaphors for learning: learning as a *compass for navigating*; *triggers* of learning; *virtual learning communities*;
- Metaphors for the topics HRD deals with: *whole person development*; organizational *culture, memory and scripts*; *global markets*;
- Metaphors for HRD methods: mentoring as a *tool*; evaluation through *smile sheets*; *brainstorming*.

Metaphor in HRD education

Although little has been written specifically about metaphor in HRD education, much is in print about the use of metaphor more generally in education that has a potential read-across to HRD. Ortony (1975) described metaphors as being "used as teaching devices since the earliest writings of civilized man" (p. 45). The potential benefits of using metaphor in education include: permitting teachers to provide or transmit meaning for unfamiliar or abstract concepts and providing the most memorable ways of learning; providing a way of passing from a 'familiar system' to a 'to-be-learned' system, directing the learner's attention to key information, and encouraging learners to connect events into a coherent structure; and providing an efficient means of transmitting large chunks of information in a memorable manner through the mnemonic powers of vivid images.

Writings on metaphor usage in education therefore suggest that metaphors offer the potential to be used in describing the HRD field to students, or in teaching aspects of the field. A potential advance for the field could come from studying which metaphors are being used, and which metaphors and methods are most successful in educating students of HRD.

Using metaphor to describe HRD

Metaphors for the field of HRD have three potential uses:

- to better describe the field to those outside of it;
- to better communicate complex aspects of the field to HRD students and clients; and

- to highlight differences of opinion on the nature of the field, and differences between HRD and other disciplines.

The metaphors used in HRD, as illustrated earlier in the article, provide an insight to the various aspects of the field (the people, the environment they operate in, the problems they address, the approaches they take, etc), but without describing the whole field. That stated, one does gain an insight to the whole field by looking for themes in those metaphors and identifying what Averill (1990) described as 'abstract metaphors:' subordinate categories of metaphor for the most part not found in ordinary speech. For example, one emerging abstract metaphor for HRD identified from the metaphors listed earlier is that 'problems are divides to be crossed or closed.' That leads to such language in recent HRD literature as: skills gap; theory-to-practice gap; a bridge to link individual and organizational development; bridging the producers and consumers of HRD research; research-practice gap; and linking HRD to strategy. Another apparent abstract metaphor for the field is that of 'organizations can be treated as human entities.' That leads to such language as: organizational health; organizational identity; organizational memory; and organizational role shock.

If we agree with Schön (1993) that metaphors frame realities, then such metaphors as 'problems are divides to be crossed or closed' and 'organizations can be treated as human entities' may well influence how those in HRD conceptualize, and design solutions for, certain problems. If we also agree with Lakoff and Johnson (1980) that metaphors can help to create new realities, then the question arises as to what alternative metaphors could replace these two and produce different ways of conceptualizing problems and organizations.

Such meta-analysis of metaphors provides only a limited picture of HRD without providing one metaphor for the whole field. Several authors though have written metaphorically about HRD, for example, Lee (1998) described the metaphorical links between HRD and clover, with the three parts of a clover leaf representing HRD theory, practice, and being. However, arguably the most widely recognized metaphor for HRD is Swanson's three-legged stool, which Swanson (1999) described as "a visual portrayal of the components of the theoretical foundation of HRD" (p. 2). Although not a definition of HRD processes, the stool stressed what Swanson described as the unique integration of psychological, economic, and systems theories in the HRD context, which have since been supplemented with ethics. McLean (1998) also offered the metaphor of the HRD centipede to stress limitless sources of input into the complexity of HRD, and the HRD octopus (whose eight tentacles were viewed as more manageable than the hundred legs on a centipede).

Whereas metaphors to describe the HRD field have focused on objects (stool, centipede, clover leaf), those describing the development of the field appear to have had a strong link to the 'journey' metaphor that Lakoff and Johnson (1980) argued was one of the central metaphors of Western culture. The journey metaphor embodies notions of progress, direction, and purpose, and specific examples from recent HRD articles include: HRD on a theory-building journey; journey management of HRD institutions, body of knowledge, and direction; reorienting the theoretical foundations of HRD; HRD as a boundary-flexing, evolutionary system; HRD at a crossroads, with a dominant path, signposts, and a road map; HRD as having taken a detour; and the HRD stream.

All of the metaphors so far cited in this section have originated from within HRD, and a study of those metaphors, although potentially illuminating and useful for the field, would omit an important source of HRD metaphors: those used about the field by those from outside of HRD. Exploring the HRD-related metaphors used by current and potential clients and partners of those in HRD, and those in related disciplines such HRM and organizational psychology, would assist in understanding how they view HRD and identify sources of common ground and potential differences.

Using metaphor to generate new perspectives on HRD

So far, I have focused on identifying and exploring metaphors already in use by those in HRD (in research, practice, and education), and those used to describe HRD. Yet, Lakoff and Johnson (1980) asserted that metaphors could create new realities as well as define existing ones. For HRD, that could imply exploring alternatives to such HRD metaphors as: the stool; the centipede; the clover leaf; problems are divides to be crossed or closed; organizations can be treated as human entities; and HRD is on a journey.

There are two approaches to generating new perspectives: considering existing metaphors from other fields and their potential use in HRD; and generating new metaphors. I shall explore each in turn.

Using existing metaphors from other fields

'Importing' metaphors from other fields offers those in HRD the opportunity to reflect on how they could be adapted for use in this field. One area of potentially useful 'imports' is that of consultancy, where the role of the consultant has been likened metaphorically to: helper, colleague, oracle, shoe clerk, entrepreneur, detective, advocate, friendly co-pilot, navigator, and many more. Each metaphor emphasizes particular aspects of consultant behavior, allowing the discussion to focus on whether such behavior adds value to the consultancy or hinders the consultant's effectiveness. The shoe clerk, for example, illustrates where a consultant approaches problems with a fixed number of possible processes or 'solutions' and has to mold problems to fit them.

Identifying and exploring metaphors for consultancy raises such questions as: how relevant are they to HRD consultants, how often do we use them and what are the consequences of such an approach, what would be the benefits in HRD education of using these metaphors to highlight various approaches and 'bear-traps,' and what other metaphors might be appropriate for the various roles we play in HRD? On that latter point, what about such possible metaphors for HRD consultants as: missionaries; historians; librarians; interpreters; mouthpieces; fall guys; flag-bearers; and doctors?

The field of organizational studies offers another example of the potential of applying metaphors from other fields to HRD. For example, what if HRD was viewed within the broader 'organization as an organism' metaphor as being the eyes and ears of management? How might that result in different perceptions of HRD roles from the view of HRD within the broader 'organization as a machine' metaphor, where HRD could be seen as the lathe operator who grinds the machine parts to the correct size? Alternatively, what if we view HRD as a torch shining light into the unexplored corners within the metaphor of 'organizations as psychic prisons'?

Generating new metaphors

Although there are no set instructions for devising metaphor (Davidson, 1978), most authors agree that the process makes significant use of past experience, perceptions, and a triggering by unusual comparisons. Schön (1993) described one three-stage process for generating new metaphors: noticing or feeling that A and B are similar, without being able to say similar with respect to what; describing relations of elements present in a restructured perception of both A and B, that is formulating an analogy; and constructing a general model for which a redescribed A and B can be identified as instances. That process starts by posing a kind of riddle - how is one object like another? Once entertained, those seeking answers to the riddle notice new features of both objects, leading to a transformation of phenomena.

Exploring how the HRD field can be seen as other unrelated things offers the potential of transforming how we perceive HRD, which can in turn change our behavior. Using Schön's (1993) three-stage process, we would begin by exploring our experiences to identify how HRD is similar to other concepts or objects. That would lead to analogies, and eventually to general models. A poster submission to the 1999 annual conference of the Academy of HRD (Short, 1999) illustrated the first two stages of Schön's process: noticing a similarity and exploring analogies. By asking in what ways the training process was similar to the effects of heat in transforming an ice-cube into steam, Short drew analogies between ice and pre-trained employees, and between the realizing of steam as a higher state and the transformation potential of training.

One area in particular need of new 'generating' metaphors is in the description of the whole HRD field and its relations to other disciplines. How satisfied are we that the stool, centipede, clover leaf, and others like them, sufficiently capture the nature of HRD in its many forms? What alternatives exist that capture aspects of HRD missed by those metaphors? What alternatives exist that capture the same aspects in better ways? In what ways do the existing metaphors limit our perceptions of reality and our behaviors, and how can we shift away from that position?

Obviously, because of the nature of this paper, I have raised far more questions than answers. However the purpose has been to illustrate the potential benefits from generating new metaphors and, as such, I trust that the questions offer a suitable illustration of the avenues available to explore.

Conclusions

Despite there being well over 125 documented definitions of metaphor, there is a clear tradition that views them as central to the task of accounting for our perspectives on the world. Often though, they are so deeply embedded that people are blinded to their influence. Within that tradition, metaphors are viewed as framing our realities, and so not only influencing our language but also our behavior. As such, the metaphors used in HRD influence how reality is framed by those in the field, how problems are conceptualized, how solutions are designed, and how efforts are evaluated. That influence could benefit or hinder the field and gives rise to discussions on how perspectives, language, and behavior of those in HRD can be influenced by changing the metaphors-in-use.

Metaphor is so prevalent in our language that it is easy to find examples from any field or discipline, and academics in several disciplines related to HRD have completed formal analyses of metaphor usage. Two such areas are psychology and organizations. In the former case, metaphors have been traced back centuries providing illustrations of how metaphors have influenced psychological thinking. As for organizations, there are many published accounts of metaphors to describe whole organizations and organizational issues, as well as accounts of metaphors used to diagnose and transform organizations.

Knowing that metaphorical analyses have been applied to other fields raises the question of how to approach such a study for HRD. In this paper, I have offered a structured framework for that study under the three headings of:

- exploring current metaphor usage in HRD - by using qualitative methods to explore metaphor usage in HRD research (including for data collection and validation), in HRD practice (including the language used to describe the aims of HRD, and its processes, concerns, and methods), and in HRD education (including describing the field to students and in teaching complex, substantial, or abstract aspects of the field);
- exploring metaphors for the field of HRD - both by using metaphors designed to describe the field (such as the stool, centipede, and clover leaf), and by identifying themes in HRD language (such as the tendency for HRD to view certain problems as gaps or divides to be bridged or closed); and
- generating new perspectives on HRD - both by applying metaphors from other fields (such as metaphors for consultancy), and by generating new metaphors to describes aspects of the field, the field itself, and the relationship between HRD and other disciplines.

To summarize, I have set out how research could explore the use of metaphor in HRD and reasons for wanting to undertake such a task, and have provided a metaphorical 'taster' of what that research might discover. As described, it is the 'first step' in a research 'journey' and 'a process for bridging the divide between where HRD is and where it needs to be' in its understanding of metaphors and their impact. As such, perhaps the way I conceive of the research provides a perfect illustration of the impact of HRD metaphors on my own thinking and actions.

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Scientific Paradigms and Their Implications for a Vision of HR/HRD

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Scientific paradigms can provide "new lenses" from which to view the field of HR/HRD. Paradigms from physics, biology and chemistry echo themes of an increasing role for consciousness, holism and interconnectedness in our universe. These same themes have implications that point the way for a new vision for HR/HRD as organizational architects of human development. Holistic approaches require, not only developing the intellectual capital of individuals, but the whole person with emotion, spirituality and ethics.

Keywords: Paradigms, Human Resources, Vision

In his book The Structure of Scientific Revolutions, Thomas Kuhn introduced the concept of the scientific paradigm which he defined as "a constellation of achievements - concepts, values, techniques, etc. - shared by a scientific community and used by that community to define legitimate problems and solutions" (Kuhn, 1962). At any specific point in history the scientific community shares a prevailing paradigm that informs and shapes the direction of work in the field. Perhaps John Casti (1990) stated it best when he said, "for most scientists major paradigms are like a pair of spectacles that they put on in order to solve puzzles". Following his metaphor he further indicates that when a paradigm shift occurs, the glasses get smashed and a new pair is put on; once again, transforming the shape of everything and providing a new vision of "truth". The new glasses will provide scientists with new puzzles to be solved while advancing what Kuhn referred to as "normal science." As Einstein so succinctly stated, "The theory tells you what you can observe."

The purpose of this paper is to review some of the scientific research creating paradigms that shape our world. The science contributing to these paradigms is largely taken from the field of physics, biology and chemistry. First a history of scientific paradigms will be presented that illustrates the likelihood that we are currently experiencing a major paradigm shift, from the well-ordered universe of classical physics, to a more chaotic but ultimately self-organizing universe. The paradigms are pointing to a vast interconnectedness of all things, in which our role is not as a separate observer, but more that of an active creator and participant.

For the purpose of this paper we will define paradigms as scientific research taken from the hard sciences that provide examples or models which can be used to help construct understanding in many different fields. This incorporates aspects of Kuhn's definition; however, his definition varies at different points in his book (1962) and involves far more detail than needed for our discussion. The selection of paradigms for this paper is idiosyncratic and meant only to provide a representation from each of the different sciences of physics, chemistry and biology. After an examination of these paradigms we will look at implications for business in general, and then, specifically, HR/HRD. What are some of the dominant themes arising from the paradigms that have particular implications for forming a vision for the future of Human Resources (HR) and Human Resource Development (HRD)? What should be the central focus of our efforts? This paper is not meant to offer a definitive vision for HR/HRD; rather, it's to suggest areas for focus, thought and future dialogue.

In The Beginning . . . There Were Paradigms

While Thomas Kuhn was the first to use the term "paradigm" as an organizing construct giving shape and direction to scientific endeavor, mankind has always found ways to structure experience into organized wholes. Prior to Aristotle myth (mythos) was the traditional means for structuring experience, presenting sometimes a strange but authoritative account of facts not to be questioned (Capra, 1975;Casti, 1989). According to Joseph Campbell (1968), myths helped explain, harmonize and balance human experience by serving functions of a metaphysical, cosmological, social and psychological nature. Aristotle introduced the opposite side of the coin with "logos", the Greek term for presenting accounts of experience from which truth can be either demonstrated and/or debated. Thus "logos" was developed into "logic" beginning the process of deduction, replacing myth, and ultimately culminating with science (Casti, 1975).

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The Paradigm That Shook the World

Arguably one of the most dramatic paradigm shifts of all times was the move from Ptolemaic astronomy to the ideas of Copernicus (Casti, 1990). Ptolemaic astronomy is an example of a long-lived paradigm that placed the earth at the center of the universe with the sun and stars revolving around it. However, by the beginning of the sixteenth century, Europe's best astronomers realized that the paradigm was failing to explain newly discovered phenomena. Copernicus' sun centered universe eventually replaced Ptolemy's ideas although, this was not easily done since the Church supported the views of Ptolemy. Galileo who supported and wrote about Ptolemy's ideas was forced to recant these positions and spent the rest of his life under house arrest by the Church. The weight of scientific evidence eventually forced the Church to accept the fact that no longer was man at the center of the universe. Kuhn asserts that paradigm shifts rarely occur immediately after a new paradigm is presented; but rather, they occur when the old system is found to be inadequate. So it was for the views of Copernicus. Initially his theory was no better than Ptolemy's for orbital predictions. However, eventually the unsolved anomalies of the Ptolemaic system gave way to explanation by the Copernican system (Barnes, 1982; Cohen, 1985).

The Newtonian Paradigm

In the seventeenth century Newton used his calculus, specifically a set of differential equations to describe all motions of solid bodies (e.g., the motion of the planets). Einstein described Newton's equations of motion as "the greatest advance in thought that an individual was ever privileged to make" (Capra, 1996). Newton's stunning successes led nineteenth century scientists to believe that the world was a completely causal and deterministic mechanical machine running according to Newtonian laws. (Capra, 1996). The world of Newton can be described as a collection of independently existing objects that exist whether we observe them or not. The Newtonian world was mechanistic, predictable and controllable. If one knew the mass, position in space and velocity of a particle, its subsequent movements could be predicted. In this Newtonian world man and all living organisms were compared to machines (Capra, 1975,1996).That which couldn't be quantified lost value; hard sciences came to dominate, soft sciences were devalued. This attitude can be seen in organizations today, hard skills dominate, soft skills are often given considerable lip service, but ultimately considered secondary.

The Quantum Paradigm – The Way the World Is?

Two major developments in the first three decades of the twentieth century – relativity theory and atomic physics – completely shattered the central ideas of the Newtonian worldview: Einstein destroyed the idea of absolute space and time and Quantum theory further destroyed the Newtonian concept of elementary solid particles and the causal nature of physical phenomena. In the Special Theory of Relativity, Einstein showed that space is not three-dimensional and time is not a separate dimension but one indivisible unit spacetime, a four- dimensional continuum. Two observers at different locations in space viewing an event could see two different "realities" and even disagree on the basic question of which event preceded the other. With this idea it became clear that there is no Newtonian, objective, observer-independent reality with respect to describing its location in space and time (Casti, 1990).

It's important to realize that Quantum theory is a brilliantly successful practical branch of physics that has given us computer technology, lasers, electron microscopes, superconductors, transistors and nuclear power.(Capra, 1975; Casti, 1989). Quantum theory arose from efforts to describe the behavior of atoms and other constituents of the microworld. Newtonian science would have predicted that subatomic particles, such as atoms, electrons c photons, would have both a finite location and a definite motion; however, quantum theory says something quite different: you can have either one or the other but not both (Capra, 1976; Casti, 1990; Zohar, 1990).Which one results (wave or particle) depends on what the experimenter is looking for or how s/he sets up the experiment.

The philosophical implications of this theory are staggering and have rocked the world of science and can best be summed up by Neils Bohr's own words, "Anyone who is not shocked by quantum theory has not understood it." Einstein echoed a similar sentiment when he wrote in his autobiography, "All my attempts to adapt the theoretical foundation of physics to this (new type of) knowledge failed completely. It was as if the ground had been pulled out from under one, with no firm foundation to be seen anywhere, upon which one could have built (Capra, 1976).

Paradigms from Biology, Chemistry and Other Fields

During the twentieth century there has been a change in paradigms from mechanistic to holistic or systemic thinking in various scientific fields. It is not, however, progressive change but rather one characterized by backlashes and pendulum swings. The basic argument can be described as a conflict between the parts and the whole. Emphasis on the parts is regarded as mechanistic, atomistic, deterministic and reductionist; emphasis on the whole is viewed as holistic, organismic and ecological. Holistic approaches are embodied in "systems thinking" that simultaneously emerged in several fields in the early part of this century (Bertalanffy 1968; Capra, 1996).

Systems concepts were brought to the life sciences by Paul Weiss who derived them from his earlier studies of engineering (Harraway, 1976) and spent the rest of his life promoting an organismic conception of biology. The idea behind systems thinking is that the whole is always greater than the sum of its parts, and its essential nature cannot be understood by dissection of either a theoretical or physical basis. This was a profound revolution in Western scientific thought and in diametrical opposition to the Cartesian paradigm that a whole can be understood in its entirety by careful examination of the properties of the individual parts. Systems' thinking of the 1920's was quickly enhanced by Gestalt psychology, ecology and as we have already seen, quantum physics.

Theory of Dissipative Structures or Chaos in Living Systems

Nobel laureate Russian born chemist and physicist, Ilya Prigogine, proposed the first detailed theory of self-organizing structures (Prigogine & Stengers, 1984). While a professor of physical chemistry at the Free University of Brussels, he constructed his theory based on physical and chemical systems, but freely admitted that his inspiration came from contemplating the problem of life. A major breakthrough for him occurred in the 1960s when he realized that open systems (living systems as opposed to physical systems) far from equilibrium must be described by nonlinear equations (Capra, 1996; Prigogine & Stengers, 1984).

In his theory of dissipative structures, he proposed that dissipation of energy or entropy is not associated with waste as in classical thermodynamics (Second Law of Thermodynamics) but leads to increased order. Prigogine has described linear systems or physical systems, as opposed to dissipative systems (living organizations), as tending to "forget their initial conditions as they move toward equilibrium" (Prigogine & Stengers, 1984). When equilibrium is approached universal laws apply and repetitive phenomena can be observed. Moving away from equilibrium, well-known characteristics of life appear that reflects uniqueness and variety (Wheatley; 1992).

The conceptual shift that evolves from Prigogine's work points to an idea that nature, instead of being like a machine, predictable, deterministic, in fact more like human nature, unpredictable, evolving, and creative. Instead of chaos or disorder leading to death, in living systems it actually leads to new forms of creativity and order. In their book Order Out of Chaos, Prigogine and Stengers suggest a new approach to nature not out of domination and control but rather cooperation, respect and dialogue. It is fitting they subtitled their book "Man's New dialogue With Nature".

Santiago Theory of Cognition and Autopoiesis – "Self Making"

The Santiago theory was introduced by two Chilean neuroscientists who postulated that mind is not a thing, but rather a process, a process that forms the very essence of life (Maturana & Varela, 1980). They identified mental activity as the essential organizing activity of life. Plants, animals and humans, all cognitively interact with their environments. According to this theory a brain and nervous system are not required for mind to exist. An ameba or a plant has no brain but is capable of perception and cognition and thus possess a mind. Cognition and mind cannot be narrowly defined as thinking, but involve emotions, perceptions and actions – the entire process of life . This theory of cognition may be the first scientific theory that resolves the Cartesian split between mind and matter; no longer are these two categories viewed as separate, but rather different aspects of the process of life (Maturana & Varela, 1980; Capra, 1996).

The theory of cognition is based on Maturana's concept of autopoiesis, a term he coined to describe the circular organization of the nervous system, which is the basic organization of all living systems. This is a process by which a living system allows environmental elements to trigger its own structural changes constituting an act of cognition. Maturana and Varela term this "bringing forth a world." Cognition does not represent an independent existing world, but rather through the process of living continually brings forth a world. From this each living system builds its own distinctive world based on its own unique structure. In the words of Varela, "Mind and world arise together" (Varela et. al., 1991).

Applications of Paradigms to the World of Business

Scientific paradigms find their way into all aspects of our society, including our social, political and business worlds (Capra, 1996; Overman 1996; Wheatley 1992). Frederick Taylor's now obsolete Scientific Management theories were also based on the linear thinking of Newton and relied on such concepts as fixed time and space, simple causal relationships and the importance of physical reality and what can be observed (Overman, 1996). Employees were basically viewed as lazy and irresponsible; in order to utilize them fully they should be paid only on a piecemeal basis so that they perform tasks with the minimum number of actions within prescribed time limits (Overman, 1996). While the Newtonian paradigm still has useful applications in many domains, it can be viewed as under siege since its mention is always of a pejorative nature in most current business literature (Wheatley 1992; Overman 1996; Murphy 1996).

In Newtonian organizations boundaries and compartments shape the way we view the world; there are highly structured roles and accountabilities. All experience is analytically chunked. Pie charts are regarded as Holy Scripture, pointing the way to greater market share, customer service or employee satisfaction. This "thing" world is a world of scientific objectivity, a mechanical clocklike world that can feel distinctly anti-human (Wheatley, 1992).

Quantum mechanics broke the clock. Quantum organizations offer the potential for us to construct new realities. As with wave packets (wave/particle), we as individuals represent pure potential. We do not exist independently of our relationship with others. Certain people and settings stimulate unique aspects of our personalities, as we move from one environment to another, each with a new cast of characters, we become slightly different in a new way (Wheatley,1992).

Presently there is a great deal of information being written in an effort to apply chaos theory and self-organization in living systems to business organizations (Stumph, 1995; Wheatley, 1992). Many management experts are rapidly becoming disillusioned with efforts to measure, predict and control business outcomes. Many are beginning to believe that business organizations, as living systems, have tremendous capabilities to self-organize. They are advocating that leaders need to embrace the biological model to find new ways to give up control, empowering workers to act as independent agents interacting with one another in the creation of new business processes.

Paradigm Themes: The Role of Consciousness, Holism and Interconnectedness

From our review of the paradigms several themes emerge: consciousness, holism and interconnectedness. The Quantum paradigm brought with it startling implications for the role of consciousness in the universe. Arguably the most spectacular aspect of Quantum theory is whether a particle or wave state manifests depends on the observer or scientist who sets the conditions for the experiment. Somehow "we" seemed to enter the arena of objective science. This amazing revelation reflects a new epistemology that eliminates the idea that there is a reality separate from the observer. From the world of physics, Wheeler stated, "in some strange sense this is a participate universe." Prigogine, from the world of chemistry indicated, "Whatever we call reality is revealed to us through an active construction in which we participate." To distill this to its essence: Our human consciousness gives us a participatory and creative role in shaping our world (Zukav, 1989;; Skolimowski,1994) .

Scientific work from the field of physics, biology and chemistry point to a holistic and interconnected world, a web of relations connecting the various parts of a unified whole (Capra, 1976; 1996). It is not surprising that our organizations are now described and interpreted in the same manner (Burke, 1992; Morgan, 1998; Wheatley, 1992;). Meier (1985) asserts that our age is frequently symbolized by the geodesic sphere, which represents integration, interrelationship and a connection to the whole. This idea has influenced not only our scientific endeavors, but our educational philosophies, organization development activities and notions about human personality (Meier, 1985). Systems approaches are commonplace in our literature on organizations. But organizations still mostly have a mechanistic approach to the development of employees. There is a great deal of discussion about knowledge workers and their training needs, all in an effort to build "intellectual capital". But there is much to do in creating organizations that develop the whole person - intelligence, emotions, spirituality and ethics. In order to examine possibilities for a future vision for HR/HRD based on the themes of consciousness, holism and interconnectedness, we need to review where we have been.

The Old HR/HRD

In order to envision a new role for HR/HRD, it is important to review exactly what that role has been. It traditionally has not been one of real authority, being accorded a middle-level position in the organization, an unenviable position ensuring tongue-lashings from above as well as endless complaints from below or adjacent levels in the organization. Generally the role has not been a strategic one; HR people are not paid to think, they are paid to react and execute. They are expected to be the ones that stick their fingers in the dike to plug a leak, but they are not asked why the dike is leaking in the first place. It is not without good reason that HR has been called the "handmaiden of management" or more pejoratively, "lapdogs of management". Vision, major decision-making and control have not been the norm. Everyone knows that HR is there to serve its master: management.

Employee surveys run by companies, irrespective of industry, often reveal that the HR department is regarded as the most irrelevant department (Weiss, 1997). Is it any wonder that there is much talk today suggesting various ways to dismantle HR? While many are discussing new strategic roles for HR, there are those who suggest elimination of the HR department and that all HR functions should be outsourced (Ulrich, 1998).

Even though, HR has had a "caretaker" role ministering to the needs of employees and following the dictates of management - something new is afoot. Those employees we have been "caretaking" are now an organization's most valuable resource. More and more there is an increasing recognition that the only sustainable competitive advantage of organizations today is not their products, but rather their employees (Caudron, 1994). The central challenge facing today's organizations is transforming the knowledge of workers into productivity and leveraging intellectual capital (Ulrich, 1998).

An Emerging New Role - Developing the Whole Person?

Cognitive development, as an important part of consciousness has definitely expanded in the 20th Century. Behaviorism dominated psychology for over half this century and clearly denied there was a mind to be studied. Arguably, the most important development in psychology over the last half of this century is the ascendancy of cognitive science and that individuals can choose the way they think (Seligman, 1994). A recent Bureau of Labor Statistics report (Galagan & Wulf, 1996) indicates that the fastest growth industry is the adult learning industry because of the rapid changes in every field and occupation. We all know that there is a tremendous need for training and education for the new knowledge jobs. Even under the Newtonian paradigm, limited cognitive development has been acceptable goal for organizations (i.e., cognitive development related to doing one's immediate job). But the workplace today also demands the ability to form connections, to build relationships as exemplified by: the new emphasis on teamwork, the need for employees to assume temporary or permanent leadership roles and the need for diverse groups to work together, not only locally, but globally.

As we saw from Maturana and Varela's research, cognition not only encompasses thinking but emotions and the entire process of life. Morris (1993) indicates that most organizations have not taken into account research on adult development that emphasizes adult transitions and transformations, including feelings, thoughts and morals. Organizations will have to realize the importance of a holistic approach to organizational design and the development of its human resources. . All of this necessitates training, organizational design and organizational development to not only help people develop cognitively, but emotionally and ethically as well. It could be argued that because the work of knowledge workers requires a high level of functioning, the organization could become the biggest purveyor of and strongest force for human development in our society.

The concept of the learning organization certainly exemplifies the importance of organizational design to create a continuous learning environment for development. Peter Senge (1990) promotes a systems approach to the learning organization in which organizational learning includes teamwork, collaboration, creativity and all knowledge processes as part of the collective norms and values with a common meaning for all. Senge (1990) viewed the organization holistically and described five disciplines essential to the learning organization: 1) systems thinking, 2) personal mastery 3) mental models 4) shared vision and 5) team acquisition of knowledge. All of the disciplines are to be used by the individual to augment organizational knowledge, thus, ensuring organizational success. Even though Senge's work defines the learning organization, all of his disciplines are largely cognitive in nature, only one, personal mastery touches on issues of emotions and spirituality.

Role of Emotional Intelligence

It has been stated that "learning organizations assume the competence of all members" Confessore and Kops (1998). But we need to acknowledge that even your most competent members have periods in their lives when personal problems render them functionally incompetent. Also, sometimes people who otherwise function quite well have emotional "blindspots" that can be destructive. In today's environment, the mere mention of introducing training concerning anything to do with emotions is guaranteed to be greeted with disbelief and raised eyebrows. You could actually be viewed as a subversive. Yet, Daniel Goleman (1995) is pioneering the promotion of emotional intelligence and his work is beginning to open a discussion of the legitimacy of introducing such learning into business environments.

Goleman tells the story of a manager who had glaring blindspots regarding his own conduct resulting in disaster for the workplace. This manager was the epitome of abusiveness, which resulted in his employees being so intimidated that they would never give him honest feedback. While in many workplaces this may have had no outward consequences, in this workplace it was fatal: the plane he was piloting crashed because no one on the flight deck dared speak up to question his decisions (Koonce, 1996).

Goleman's (1995) research shows that emotional intelligence is emerging as a critical piece of our human development. He indicates that IQ may help a person get a job but it's emotional intelligence that helps him /her keep it. His research has demonstrated that the emotionally adept, those who understand and cope with their own feelings well, who can read and effectively handle the feelings of others, have a great advantage in both personal and work relationships. The ability to bounce back with optimism, after experiencing hardship and adversity, or respond with equanimity to hostile attack is a great advantage in any arena. Goleman (1994) views emotional intelligence as a meta-ability: It determines our ability to use effectively the other skills we possess as well as our intellect.

Spirituality and Ethics

The paradigms show us that the world is interconnected at its most basic level and that consciousness is a part of all lifeforms, the planet and universe as well This connectedness of all things has profound implications for spirituality and ethical behavior (Capra 1996; Zukav, 1989). Ecology is showing us that we can't abuse certain areas of the planet and not expect repercussions elsewhere. The world community is now looking in on the treatment of all the citizens of the world. Unethical treatment of people in organizations is now being exposed more than ever. People who have not found spiritual reasons to treat others equally, or haven't even discovered that treating people well or fairly makes good common sense, should at least be tempered by exposure for such behavior in the future. Once again, the boundaries are disappearing. Unethical behavior in business has been easily achieved in the past, but as boundaries weaken, it is, at least, getting somewhat harder to do.

It's reassuring to know that even in the field of economics, they are also wrestling with paradigm changes. John Tomer (1998) critiques the mechanistic economic models that reduce businesses to vehicles for achieving outputs and ignore intangible or "soft" assets such as leadership, principle, character, spirit and vision. He postulates a holistic model of economics that accounts for the "soft" assets being as critical for success as the usual hard assets (organizational structure, financial structure, etc).

As part of a vision for the future, HR/HRD should take a firm stand and plant itself firmly on ethical ground. Currently, employees, when they run afoul of managers, can expect little support from their own HR department even when they have been wronged. HR/HRD too often works to cover-up the wrongdoing of managers, rather than taking an independent fair-minded approach. Weiss (1997) describes corporate downsizing as an example of a "morally bereft" effort based on a short-term mentality by top executives to pump up the organizations bottom-line and their own compensation packages. He asks an excellent question, where is the moral outrage on the part of HR? He sadly concludes there is none because "HR is often an accessory to the slaughter".

Now some will say it's not our place to take an ethical stance against upper management. However, if HR/HRD wants to craft itself as consultants, coaches of people development and as architects of organizational environments, then it must take on this role or risk having very little credibility with the human resources it's there to develop. Serving as a "check and balance" on upper management's ethics should ultimately be welcomed by upper management; it could save them a lot of lawsuits.

We can compare this "check and balance" system to the organization of our government with its three branches of government serving to balance the actions of one another. The organization with its hierarchical structure has been an anomaly in a democratically constructed country for some time. We are already seeing this structure change with the emergence of matrix organizations. The higher cognitive development of people will call for more democratically designed organizations, as well as systems approaches for maintaining ethical integrity.

A New Strategic Direction?

Some will say that it's a Herculean task for HR/HRD to lead the charge in promoting the full development of employees. Being an architect of human development, perhaps, is a clarion call only to the brave. But is there a more ethically responsible stance to maximize the productivity of employees? Should we envision anything less when we consider that human resources were originally used to serve production, but production is now being designed to serve human resources (Meier, 1985). It seems HR managers should be a step ahead of the human resources they are there to manage. This requires adopting a strategic orientation to the organization. Recent articles based on surveys of HR executives and professionals are echoing a theme that HR/HRD should prepare to move into strategic positions in organizations (Caudron, 1994; Stuart, 1992; Walker, 1990;). The middle-management position is no longer appropriate for those who have inherited the role of developing, cultivating, training and supporting the central asset of organizations.

In order to pave the way and even have the time to reorient to a strategic role, HR/HRD will have to make decisions about which activities will be considered core activities and which can be spun-off. We are seeing that some CEOs consider less important such HR functions as compensation, benefits and labor (Stuart, 1992). Today it is not unusual to see many of these functions, including training, outsourced. Increasingly, CEOs want HR/HRD to provide them with fundamental business decisions and make suggestions for future developments. A call is going out for HR/HRD to become a strategic business partner and to address bottom-line business needs (Stuart, 1992).

Unfortunately, most HR/HRD departments don't have the clout to command CEO attention. Too often CEOs call in consultants to provide them with the same information their HR/HRD department has been trying to tell them for years (Weiss, 1997). Some experts believe that HR is frequently not even out front on issues that should be its natural domain, such as workplace diversity, sexual harassment, work/family balance issues and goal alignment (Weiss, 1997). If we defined ourselves as organization architects and facilitators for human development, would there be any doubt that we should be on the leading edge of these issues that define even the current corporate landscape?

Interim Steps for Budding Corporate Architects . . .

In order to work toward a vision of becoming architects and facilitators of human development, we need to consider some pragmatic guidelines for getting there:

(1) We need to start with building our credibility as organization problem solvers. The good news here is that more and more CEOs are asking for this from HR/HRD (Stuart, 1992; Caudron, 1994). To achieve this goal will entail more learning about what contributes to bottom-line business results, including understanding the nature of the product, business direction of the company, who the customers are and how the business is positioned in the marketplace. This means developing a HR business plan with specific details regarding HR implications for each one of the company's business goals (Caudron, 1994).

(2) To augment goals of becoming strategic-minded regarding bottom-line business results, we, in this field, should assess our college and university HR/HRD programs to ensure that there is some "hard" business knowledge as part of the core curricula. It's not unusual to hear organization experts stating that MBAs are more useful than a Ph.D. in organization development (Weiss, 1997). Perhaps we should take this as a cue that we should incorporate *some* hard business courses. We must be careful not to over focus on business courses which could take us away from developing our human resources. It's important to consider what courses are essential to help HR/HRD become the central resource for performance development in an organization.

(3) Perhaps the best place for HR/HRD to start building credibility is to work to build and augment the relationship with our natural partners, the line-managers. Caudron (1994) asserts that HR/HRD has traditionally offered prepackaged HR services to the company, but is now shifting to provide service that helps line managers develop and manage their own HR policies. More companies today are utilizing HR as partners for their operating managers. Basically what is taking place is an exchange of functions: HR works with managers to handle some of the traditional HR functions, thereby, providing more time for HR managers to understand and help solve the bottom-line business problems of operating managers. Both work in concert to develop and provide an environment that enables employees to work in an optimum fashion (Caudron, 1994). Similarly, Confessore and Kops (1998) promote the concept that HRD professionals need to move beyond their role as trainers and "become coaches, consultants and counselors of learners."

(4) As we saw in item number (3), forming connections in the organization will be critical for our success. Additionally, HR, HRD and OD have, in many ways, like couples in a bad marriage, split up and gone their separate ways. Sadly, sometimes they don't even speak. The potency of our profession is dependent on working across these mechanistic barriers (Remember the paradigms!) and forging a comprehensive and integrated vision. The roles can still be separate in many ways, but we need to consider more cross-functionality of training and knowledge. Allison Rossett (1996) describes that HRD people often don't understand what organizational development is all about; thus, they fail to recognize when that is the solution, rather than training. She tells how AMOCO, following on the quality movement's emphasis on cross-functionality, asked her to help integrate their OD and HRD department. Also serving the theme of collaboration and connections, HR executives are frequently forming partnerships with other companies in an effort to leverage their collective technologies and other competencies (McMorrow, 1999).

Onward to the Challenge!

The end of this century brings us to an interesting crossroads. It's as if HR/HRD has been an understudy waiting in the wings backstage; suddenly we find ourselves thrust into the limelight, are we ready? A strategic role has been proffered -- can we handle it? It's not without good reason that HR has been called the "handmaiden of management". Vision, major decision-making and control have not been the norm. We know that with the new limelight on human resources in the knowledge age, a ball has definitely been tossed to us, whether we run with it or fumble depends on what we do now.

The paradigms we have reviewed have themes that could have profound implications for the future of HR/HRD. Even coming from divergent fields, they speak to us of a holistic unity of our world, permeated and interconnected through consciousness. Today we hear much about and are dazzled by the technological and scientific achievements of our world. So much so, that we almost have failed to notice our own development. It's certainly paradoxical that paradigms from the world of science are teaching us about the importance of developing the whole person and the creative role of consciousness in creating or "bringing forth" our world.

As we begin to consider our future in the next millenium, never have conditions been more favorable for a dynamic, new and strategic role for HR/HRD. Emerging into the era of the knowledge worker, we, as the traditional caretaker of human resources, find ourselves on center stage. By looking carefully at the prevailing scientific paradigms, we can see the outline of possible future developments that put us in our rightful place: at the heart of an organization.

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The Meaning of the Meaning of Work: A Literature Review Analysis

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This literature review addressed the state of research concerning the concept of the meaning of work. This analysis is an update of a preliminary review conducted four years ago. This inquiry built on the theoretical foundation of the content motivation theorists, but focused on what the research informs us about meaning of work as a motivational construct. Several elements were identified that could form the basis for such a construct.

Keywords: Meaning of Work, Spirituality, Self-Actualization

Four years ago, a small group of doctoral students studying with a faculty member of their HRD program conducted a preliminary literature search to see what research had been conducted in the area of meaning and spirituality of work. While they discovered there was relatively little research reported in the literature, there was enough to begin to formulate a set of conclusions around a dichotomy between values and meaning. Since then a number of other studies have been conducted that now allow us to perceive several consistencies among the findings about what is the meaning of the meaning of work.

"The managerial and popular literature is [still] increasingly referring to individuals questioning the meaning and purpose in their work" (Chalofsky et al, 1997. A significant number of the books published by the major management publishers certainly reflect this theme, as well as the popular and professional magazines. There are at least ten conferences a year on spirituality and work in this country and this same topic is beginning to be echoed internationally. The baby boomers are going through mid-life questioning the meaning and purpose of the work and their lives. The twenty somethings are questioning whether they even want to start down the path their parents took, career-wise, and are making different choices about the role of work in their lives.

Theoretical Framework

Gayle (1997) reported that the classic motivation theorists and humanistic psychologists clearly supported the notion that individuals have an inherent need for a professional life that they believe is meaningful (Alderfer, 1972; Herzberg, et al., 1959; Maslow, 1943, 1971; McGregor, 1960; Rogers, 1959, 1961). Maslow (1971) wrote that individuals who do not perceive the workplace as meaningful and purposeful will not work up to their professional capacity. Yet, with rapidly changing economic conditions, organizational structures, and job requirements, what once may have provided a measure of meaning and purpose for individuals in the workplace is eroding (Csikszentmihalyi, 1990; Shamir, 1991).

There is a long history of research and discourse about what motivates employees and the relationship between job satisfaction, morale and performance/productivity. As organizations became more complex, assumptions about the power of rewards such as pay, security, and working conditions were questioned. In addition, the correlation between morale and productivity was challenged. In response, the human relations movement produced theories focused on human needs. This classic motivation literature referred to work itself as the primary motivator.

Maslow (1943, 1954, 1970, 1971), Herzberg (1959), McClelland (1965), and Alderfer (1972), theorized that individuals are motivated to take certain actions based on fulfilling needs believed to be inherent in all humans. These content theorists all proposed that as these needs move from basic survival needs to higher order needs, they become more intrinsic and reflective in nature. The higher order needs are translated to values, working toward a higher cause; meaningfulness and life purpose. (Given the brevity of this paper, the individual theories of the authors mentioned above will not be discussed in detail.). A few theorists moved beyond the notion of the value of performing a set of tasks as a primary motivator, most notably Maslow (1971). After establishing his *hierarchy of needs*, he began to explore the meaning of work. This exploration was expressed in his description of being values,

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referred to as *B-values*. B-values included truth, transcendence, goodness, uniqueness, aliveness, justice, richness, and meaningfulness. A self-actualized person would feel that work equates with play and both become an integral part of a person's being. Maslow equated B-values with spiritual values which he believed is a part of the human essence (Gayle, 1997).

Also noteworthy is the thoughtful discourse from Rogers (1961), Locke (1975), and Ackoff (1981. Rogers (1961) believed that people find purpose when they experience freedom to be exactly who they are in a fluid and changing manner. Locke (1975) wrote that people strive to attain goals in order to satisfy their emotions and desires. Ackoff (1981) described purpose and meaning as progress toward an ideal that converts mere existence into significant living by making choice meaningful. And lastly, further exploring the meaning of work would provide an opportunity to learn from where Maslow and others have left off.

Purpose

The purpose of this paper is to determine what the research and theory-building literature can inform us about the meaning of work. At the time we did our initial review, there was little or no research on the meaning of the meaning of work, even though the popular and professional literature has addressed the issue for years. We wanted to know not only what the more recent research is about, but also how it may change our initial perceptions of the scant research we found four years ago.

A review of this nature is important to: (1) develop a framework for understanding the construct, (2)how HRD practitioners may impact workplace productivity and satisfaction, and; (3) determine what gaps exist that warrant further research and theory-building.

Methodology

A literature review of researched-based articles, both quantitative and qualitative, was conducted in 1996. Business, psychology, sociology, and education literature was reviewed. The following databases were searched: ABI/Inform, Educational Resources Information Center, Psychological INFO (journal and articles), and Dissertation Abstracts. Keywords used in the literature search include: work values and beliefs, work and meaning, work and spirituality, motivation and meaning, motivation and high performance, purpose of work, work and personal growth. The same review was again conducted in 1999 to see what had been added to the literature. The resulting literature were reviewed and analyzed.

Findings

Two major areas within meaning of work were identified in the original literature review, values and meaning. This update has concentrated on the meaning of the meaning of work. But first a synopsis of the original review will be presented.

Values

A preliminary keyword search identified a limited number of literature reviews, articles from scholarly journals and abstracts of doctoral dissertations on "values" as they relate to "work" and "spirituality." The initially daunting variety of concepts that appeared in these articles was sorted into four clusters: cognition, emotion, action, and outcomes. The cluster titles also suggest a process of value formation.

The cognition cluster includes key words like valuing, comparing, recognition and assessment. The cognitive dimension of valuing involves the determination of whether an option is worthy, either intrinsically or in relationship to some extrinsic outcome. Broenen described cognition in valuing as "making subjective rankings or judgments about variables in one's environment that may relate to how satisfying one considers one's job" (1990, p.2).

The emotion cluster includes concepts like, needs, desire, and affect. George (1996) found that research in subjective well being suggested that values, attitudes and moods form a powerful triple interaction that can affect job satisfaction and turnover. Emotions also help energize or motivate action. Action/Result keywords include performance, behavior, and goal achievement as outcomes of value motivated activity.

Much of the research on organizational behavior and human resource management involves the interaction of individual values with the workplace (Coomey, 1988; Carlson, 1995). Coomey reported that her search of the literature uncovered widely diverse definitions of values which she eventually consolidated into one. According to Coomey's definition, values are the transformations that take place between actual or perceived outcomes (rewards, losses, etc.) and affective states (satisfaction, dissatisfaction, etc.) which lead to action (behavior, performance, etc.). She further explained that values derive from a vast number of contextual variables like: childhood, education, occupation, personal goals, stage in the life cycle, perceived equity, organizational climate, outcomes, and values themselves. It was suggested, therefore, that values, instead of being isolated entities, more closely resemble a system.

Four themes that elaborate the cognitive, emotive, and action/result dimensions of value and work also emerged from the literature: (1) intrinsic vs. extrinsic factors; (2) work values and quality of work life; (3) subjective well-being and happiness; and (4) working hard vs. working smart.

Meaning

Csikszentmihalyi (1990) in his attempt to define meaning, readily acknowledged the difficulty the task presents by suggesting that any definition of the term would undoubtedly be circular. However, he points to three ways in which the word may be defined: (1) having a purpose or the significance of something, (2) the intentions one holds, and (3) identifying or clarifying the term in context. Similarly, one may attempt to define work. Dirkx (1995) subscribed to the theory that work is one of the ways that a mature adult cares for oneself and others. This was expressed by respondents in the Schaefer and Darling (1996) study who defined work as an opportunity for service to others and not distinct from the rest of life. The term may also be definitive of one's uniqueness and a way of expressing one's self in the world.

Adding the word "work" to meaning presents an even greater challenge at definition. Meaning of work suggests an inclusive state of being. It probably is that which seeks to define who we are, the purpose of our being, and the spirit with which we approach what we do. Put in a spiritual context, it is that which gives essence to what we do and what brings a sense of fulfillment to our lives. The literature indicates that meaning of work is a significant contributor to meeting one's purpose in life. Supporting conditions for its fulfillment are work spirit and the sense of being as founded in one's spirituality. These are regarded as cogent factors for finding meaning in one's work.

The conclusions we reached in the initial review revolved around a dichotomy between values and meaning in relation to work. The literature seemed to refer to values as intrinsic motivators to performing a job and deriving satisfaction from a job. The emphasis is on what the job means to us in terms of the congruence of the tasks with our beliefs, objectives, and anticipated rewards. Values are relatively easy to identify through instrumentation; and understanding the fit between values and job responsibilities significantly influences job satisfaction.

The meaning of work, on the other hand, . . ."comes from the inside out; work is the expression of our soul, our inner being" (Fox, 1994, p.5). The meaning of work is in and of itself much subtler; as is the distinction between meaning related to work and values related to a job. The distinction seems to lie in the notion that a job is what we *do*; work is who we *are*. We get paid to do our job; we are successful if we achieve some goal or target. Yet, as Fox points out, much work in our society is not paid at all; for example, raising children, tending a garden, singing in a choir, or organizing youth activities. So what then is the nature, the meaning, of the meaning of work?

Meaning of Work Research

Wishner's (1991) study on the influence of the meaning of work, among other constructs on job satisfaction of school psychologists, yielded interesting results. Though the prediction that the meaning of work was prominent and intrinsically important was not confirmed, the construct itself proved the single best prediction of job satisfaction. This indication propelled the researcher to conclude that the meaning of work has a more pervasive role in the lives of individuals. Shamir (1991) reported that a task can be motivating due solely to its meaning to the individual, rather than for the intrinsic rewards it may bring. Jaeger (1994), in investigating the self-employed, concluded that among aspects of the Protestant work ethic, a need for meaningful work was the single most important descriptor which defined the individuals' sense of purpose in their contribution to the spirit of community living. Further, the researcher concluded that work was an accepted part of the participants' personal identity. It was that which brought meaning, enjoyment and satisfaction to their lives.

It seems that one's ability to achieve meaning from one's work depends on what one brings to the work itself. Loscocco (1985) identified two elements - work commitment and work orientation and suggested that these are designators through which people come to and assign particular meanings to the work they do. In one aspect, work commitment represents the relative contribution of work to the sense of self, while work orientation reflects the importance people attach to the various types of rewards available from the work they do.

Together, these ideas are reflective of Connelly's (1985) concept of work spirit, the set of qualities exhibited by people who enjoy their work enormously. Among these qualities are a positive state of mind, a sense of purpose and vision, and a full sense of self. One group of participants in Connelly's study describes work spirit as a "ground of being," a continuing state of mind from which everything else emerges. Connelly concluded from this study that people who love their work and find meaning in it realize that their work experience, to some extent, is dependent on what they themselves bring to the experience.

Shamir (1991) argued that current work-motivation theories should be augmented by the concept of self. He built a theory of self-concept-motivations on the following assumptions: that people are not only goal-oriented, but also self-expressive; that they are motivated to maintain and enhance their self-esteem, self-worth, and self-consistency. Shamir also postulated that self-concepts are composed, in part, of identities. He further suggests that self-concept-based behavior is not necessarily related to clear expectations or specific outcomes. These assumptions imply that work motivation will be increased when job related identities are prominent in the self-concept, and when the engagement offers opportunities for enhancing self-esteem and self-worth through actions that are consistent with the person's self-concept.

Pitts (1995) indicated that the ability to find meaning in one's work is an expression of one's sense of self. It seems then, that if people derive meaning from their work to the degree of how work spirit is described, then work becomes one means of how people are grounded in who they are as spiritual beings. Neck and Milliman (1994) suggest that a central aspect of spirituality involve the meaning of one's work. The concept itself (spirituality) is multi-dimensional and may be expressed as a transforming power or an expressed desire to find meaning and purpose in life. It also suggests a desire to make a difference and create a meaningful world, or an inner wisdom and compassion. Sveinunggaard (1992) similarly describes one's spirituality as a transformational life experience that gives rise to a reaffirmation of self-characterized by a contextual awareness of oneself as one journeys inward to discover the self.

The theory of self, as expressed through spirituality, is defined by Hartman (1996) as inclusive of all human experiences including work and one's experience of reality. Further, the researcher indicated that the meaning one encounters from this reality gives rise to the quest for significance. This theory is substantiated by McEnroe (1995) who claimed that the most significant factor contributing to outstanding leadership is the executives' strong inner core of spirituality which, among other competencies, include finding meaning in everyday life, what they do, and what happens to the organization.

Csikszentmihalyi (1990) found in his research on high performance that people in what he refers to as a "flow state" actually feel a sense of disappointment when they achieve the objective of their performance, because the act of performing is the motivator; not the accomplishment of the task. People in the flow state derive meaning from their work because they both believe/know they will succeed and accept "failure" because it is worth the risk. So success is secondary to the work itself and risk (and possibly failure) increases the challenge and learning, two factors Gayle (1997) found that contribute to meaningfulness among high technology professionals. The people she researched were "gold collar" employees, technical experts in great demand in the workplace who know they can go anywhere and get as much salary as they desire. So the end-goal of money or status was not what was of importance to them, it was their ability to have an impact on the organization's effectiveness through the work, and the self-directed "space" to be continually challenged, creative, and learning. Similarly, Deems (1997) found that people in two organizations she studied perceived self-authority, participatory work practices, and continuous growth and development, as integral to the meaning of work.

Several studies have dealt specifically with women and meaning of work. Svendson's (1997) study looked at how women experience the attempt to achieve integrated wholeness, the merging of their professional and personal selves. She found that the co-researchers brought their whole selves (mind, body, emotion, spirit) to their work and their "play", that relationships played a critical role in achieving integrated whole ness, and, again, the theme of continuous learning and growth. Ostendorf (1998) also found that the relationships women formed at work were integral to the meaning these women derived from their work. Personal growth and emotional well being were also themes that emerged in the study. Rulle's (1999) study of empowerment among nurses (all women) revealed the relationship between meaning, autonomy, and giving to others.

Jaeger (1994) also found the same relationship among self-employed persons. And giving to others was also a theme that emerged from Allan's (1996) study of CEO's and volunteerism and Mukri's (1998) study of Navy nurses and Schein's lifestyle career anchor. An additional theme that was the purpose of Svendson's study but also mentioned, though not clearly identified, in most of the above-cited studies was work/life balance. In Mukri's study, she found that the structure of the military actually provided the ability to commit to a balance between work and family, which was valued by the nurses and supported by the leadership.

The most recent study looked at spirituality in the workplace. Mitroff and Denton (1999) asked their respondents to define spirituality and the one word that captured their descriptions was interconnectedness. Yet their research question was about what gave the respondents the most meaning and purpose in their jobs. The findings of their survey were that people ranked the ability to realize their full potential as a person as their first choice, being associated with a good (ethical) company as their second choice, and interesting work as their third. Interestingly, the results of their follow-up interviews were that most people do not feel that they bring their whole selves to the workplace, thus they do not feel that the ability to reach their potential exists. There were other disconnects between what people believed in and what was practiced in their organizations.

There was one conclusion to their study that has significant implications for how we use the terms spirituality and meaning almost interchangeably. The popular literature tends to use the term spirituality and work; as in how can we help organizations to realize the power of spirituality at work. Yet the respondents talked about spirituality as being very personal and relating to all of their lives, not just in relationship to their jobs. Meaning of work, on the other hand, while also being very personal, resides in the interaction of the self and the work, and can be exclusive of the organization.

Conclusions

Based on a review of the literature, the following components of meaningful work were identified:

People need to bring their whole selves (mind, body, emotion, and spirit) to their work. The sense of self is critical to finding meaning in work. This includes both a very positive self-belief system and a total integration of the work self and the personal self. The positive belief system is what allows people to achieve the flow state and to thrill to the challenges and the learnings. It brings out the creative energy that results in highly productive efforts. The integration of the total self means that there is an alignment between the person's beliefs, values, and competencies, and the purpose for the work (and hopefully the mission of the organization). This alignment translates into an inner feeling that this is the work I was meant to do and this is how I was meant to live my life. Svendson (1997) used the term integrated wholeness to reflect this state of being.

Giving to others. Giving to the clients/customers of the work, to colleagues, to family and friends, and to community and society is a key component. It relates to the sense of spirituality and to the sense of mastery. The spirituality of the work is about contributing to others individually and collectively. To some it may refer to the notion of a *calling*, something a higher power or higher consciousness would expect. To others it relates more to social responsibility, what we should give back to society. The person who masters the skills and knowledge of the work shares that experience with apprentices, and this act provides additional learning and growth, as well as a sense of giving.

Recommendations for Further Research

It seems obvious that more research needs to be done to determine the impact of values and meaning on work, performance, and organizational effectiveness. We also need to learn more about the interrelationship between values and meaning, and between meaning and spirituality. We need to investigate the components of meaningful work in more depth, especially in the area of self-concept. Finally, we need to identify actual examples of meaningful workplaces and share best practices.

Implications for the Field of HRD

In this age of the "new employee contract" we need to pay attention to:

. . . our whole selves at work, to admit that some work has no meaning to us and offers no

> possibility of joy, to examine what work will have meaning to us and seek such work, to meet our co-workers self-to-self, center-to-center, and to stop pretending that our interior lives don't matter. (Only then) will our work become more joyful (and) our organizations will flourish with commitment, passion, imagination, spirit, and soul (Richards, 1995, p.94).

When the emphasis on performance is paramount over all else, employees gradually lose the meaning of their work. Such loss of meaning affects attitudes, behavior, and overall mental health. Our profession needs to search for and implement new workplace models that address work as both a vehicle for production and individual and social development and satisfaction.(Svendsen, 1997).

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Maximizing Opportunities for the Aging Workforce through Workplace Design

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This study further investigates the Kupritz findings (1999) that older and younger workers perceive similar types of design features as impacting work. The study utilizes the second phase of the Heuristic Elicitation Methodology (HEM), building upon the first phase of the HEM used in the earlier study. The first phase of the HEM is qualitative and the second phase is quantitative. Results from the present study indicate that even though older and younger workers generally associate similar design features with facilitating work activities, cohorts do not perceive similar weightings of importance for certain design features, especially those related to privacy. This suggests that design changes to the office may be necessary to provide older workers with the same opportunity as their younger counterparts to perform efficiently.

Keywords: Aging Workforce Perceptions, Workplace Design, Privacy

This study examines physical attributes of the office environment that accommodate older and younger American workers. The increasing age diversity in the workplace is a striking change in the American labor force. 76 million baby boomers, expected to live 30 or more years longer than their predecessors in 1900, face a social phenomenon unparalleled in history (Dychtwald & Flower, 1990). Demographic studies project that this aging population will play a significant role in the diversity of the American workforce (AARP, 1996; Brill, 1993; Hopkins, Nestleroth, & Bolick, 1991). Health professionals caution that design changes may need to be made to the workplace to support the physiological decline occurring in aging workers (Ashcraft, 1992; see also Robinson, Coberly & Paul, 1985). If design renovations and retrofits are deemed necessary to support the work practices of an older working population, corporations will need empirical data to guide them in allocating their finite resources to the design changes that produce the highest productivity. This study helps corporations target the most critical design areas that older and younger workers perceive as facilitating their performance. With the exception of Kupritz (1999), research examining the impact of a broad range of design features on older workers is especially uncommon; also research examining cohort perceptions is rare. The present study builds upon the research findings of Kupritz.

Kupritz discovered a system of cultural meanings that older and younger workers use to describe office features that facilitate and impede their work. The findings revealed that older and younger workers perceive similar types of design features to impact work. Aging workers do not appear to require different physical features or special design adaptions to facilitate job performance. This suggests that structural changes to the workplace may not be necessary to accommodate aging workers. As an inductive approach, these findings provide a beginning knowledge base about what cohorts think about physical features of the office and privacy, which surfaced as a major concern. The qualitative nature of this earlier study, however, did not allow Kupritz to measure the strength of relationships between physical features and work activities nor the relative importance given to office features by cohorts. This investigator believes that design differences may surface in other ways through quantitative measurement. The objectives of this study are to determine the strength of association that cohorts perceive between office design features and work activities performed and the relative importance given to office design and privacy features by cohorts.

Older and younger learners need a supportive work environment to help bridge the application gap between the training environment and the practical work environment. Trainees returning to a supportive work environment appear to demonstrate greater utilization of training skills (Baumgartel, Reynolds, & Pathan, 1984; Broad & Newstrom, 1992; Foxon, 1995; Richey, 1990, 1992; Rouiller, 1989). Research indicates that organizational climate, as part of organizational context, may be at least as important as learning in facilitating transfer (Richey, 1992; Rouiller, 1989; Russell, Terborg, & Powers, 1985). The physical setting is an integral part of that organizational context (Sundstrom, De Meuse, & Futrell, 1990). Human resource development (HRD) is in the business of improving performance. Training and development, therefore, should not take place in a vacuum for training sake; the dimensions of the larger system–the organizational context–must be taken into account when training is planned, developed and evaluated (Richey, 1992; Tannenbaum & Yuki, 1992). This means that prior to

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setting up the training program, emphasis should be placed on the organization itself, taking into account organizational issues that can impact the ultimate success or failure of the training intervention (Foxon, 1995). This includes the physical surroundings of the workplace because it can impact worker performance. Environmental design research examining individual, group and organizational performance documents that office design can enhance or inhibit overall organizational effectiveness (Brill, Margulis, Konar, & BOSTI, 1984,1985; Davis, Becker, Duffy, & Sims, 1985; DeMarco & Lister, 1985; Springer, 1982; Vischer, 1996). Based upon experiences since his 1984, 1985 research, Brill (1993) proposes that providing a supportive physical environment can yield a productivity benefit equal to 2 to 5 percent annual salary in all job categories. HRD has paid minimal attention to the role that physical surroundings play in mitigating performance in organizations.

The aging population is a megatrend creating a diversified workforce not only in age and physiological makeup but also in work and life experiences. The American Association of Retired Persons (AARP) projects that the most rapid increase in population growth will occur between the years 2010 and 2030, when the "baby boom" generation reaches age 65 (1996). The median age of the workforce was approximately 35 years in 1980, 37 years in 1990, and is projected to be approximately 41 years in 2005 (Brill, 1993; see also Hopkins, Nestleroth, & Bolick, 1991). A large percentage of older workers will experience physiological changes sooner than their younger counterparts. Organizations have raised concerns about the physiological decline of the aging workforce for some time (Ashcraft, 1992; Fox, 1951; Robinson, 1983; Welford, 1976). Robinson, Coberly, and Paul (1985) reviewed a number of studies on occupational performance with age, concluding that "environmental conditions are important in mitigating the effects of decline in aging workers" (p. 519). Environmental conditions provide the physical context of workplace design. While the review's conclusion seems intuitively valid, Kupritz (1999) determined that older workers do not seem to need different physical features or special design adaptions to perform their job, even with the physiological changes occurring. The present study further investigates this phenomenon.

Research Methodology

120 administrators participated in the present study, 59 older workers (60^+ years old) and 61 middle age workers (35-50 years old). All 120 office workers are paid and hold lead positions, with at least some supervisory responsibilities. Replicating the Kupritz (1999) study, general work responsibilities entail supervising and evaluating staff, using information technology, conducting meetings, working with clients, promoting the organizational mission, compiling reports, collaborating with coworkers, and reporting to higher management. The administrators work for service organizations in the same geographic area. They occupy a cubicle, an office with floor-to-ceiling solid walls, or a desk in an open area as their personal work space. Neither the Kupritz study nor the present study included ages 51-59 in the sample of older persons as the investigator believed that the sample cohort comparison of office features probably would be more pronounced by sampling a higher age group due to the physiological changes that occur with increasing age.

The present study utilized the second phase of the Heuristic Elicitation Methodology (HEM), building upon the first phase of the HEM used in the Kupritz (1999) study. The first phase of the HEM is qualitative and is designed to analyze complex issues by exhausting the range of respondent perceptions concerning the variables being examined.[1] The second phase of the HEM is quantitative and is designed to determine beliefs associated with the issues and to identify interrelationships among the issues. As a cognitive ethnographic method, the basic assumption of the HEM is that it is possible to match particular items and attributes with particular cultural values (Harding & Livesay, 1984). HEM stimulus materials are respondent-generated and data respondent-categorized rather than investigator-generated and investigator-categorized. This preserves the language and conceptualizations of respondents and decreases the likelihood of overlooking significant attributes of a domain being examined (Spradley, 1979; 1980). The methodology is predicated upon the idea that "language provides a powerful entry to cultural meaning structures" (Harding & Livesay, 1984, p. 75). The second phase of the HEM utilizes a structured questionnaire, consisting of a Beliefs Matrix and Preference Ranking. The questionnaire for the present study was designed based upon responses elicited during interviews conducted during the Kupritz study. Questionnaire categories reflected the language of the respondents, salient variables mentioned most frequently, and items of special interest to the investigator. Privacy regulating activities, described by the administrators during their interviews in the Kupritz study, were included in the work activities listed in the matrix as privacy surfaced as a major concern in the earlier study. It should be noted, also, that during the Kupritz interviews, the administrators discussed many of the design items listed in the matrix in relation to privacy activities. This is not surprising as most analyses consider privacy to be a relational characteristic, or attribute of a selected class of interpersonal situations (see Archea, 1977).

Beliefs Matrix. Each cohort compared 19 design features to 15 work activities arranged in a binary matrix. The respondents answered yes or no to the question, "Is X [design feature] important for/when Y [work activity]?" Past experience with the matrix indicates that data tend to stabilize with a sample size of about fifty (Kupritz, 1998; Nardi & Harding, 1978). Respondents took about 20 minutes to complete the matrix. Design items and work activities deemed less critical to the success of the study were placed toward the beginning and the end of the matrix in order to avoid possible problems with 'orientation' and 'fatigue' in respondent answers. It is unlikely, however, that 'fatigue' at least would be of much consequence in such a short time. Each respondent, upon completing the matrix, in effect answered 285 questions concerning his/her perceptions of what work activities are associated with each design feature. Table 1 displays a graphic summary of the measured association between design features and work activities for computed matrix cells, per cohort. The probability of association between design features and activities was calculated using the binomial distribution at the .01 level of significance. Z-scores were computed for matrix cells whose *p* value (sample proportion) was greater than the hypothesized *P* value (population proportion). Z-scores reached significance for particular design features and activities. Some are associated with privacy and others are not. Uses of the term "privacy" in work environments generally reflect the regulation of interaction, which encompasses retreat from incoming stimulation (generated by people and environmental stimuli) and information management, that is, outgoing information (Sundstrom, 1986).

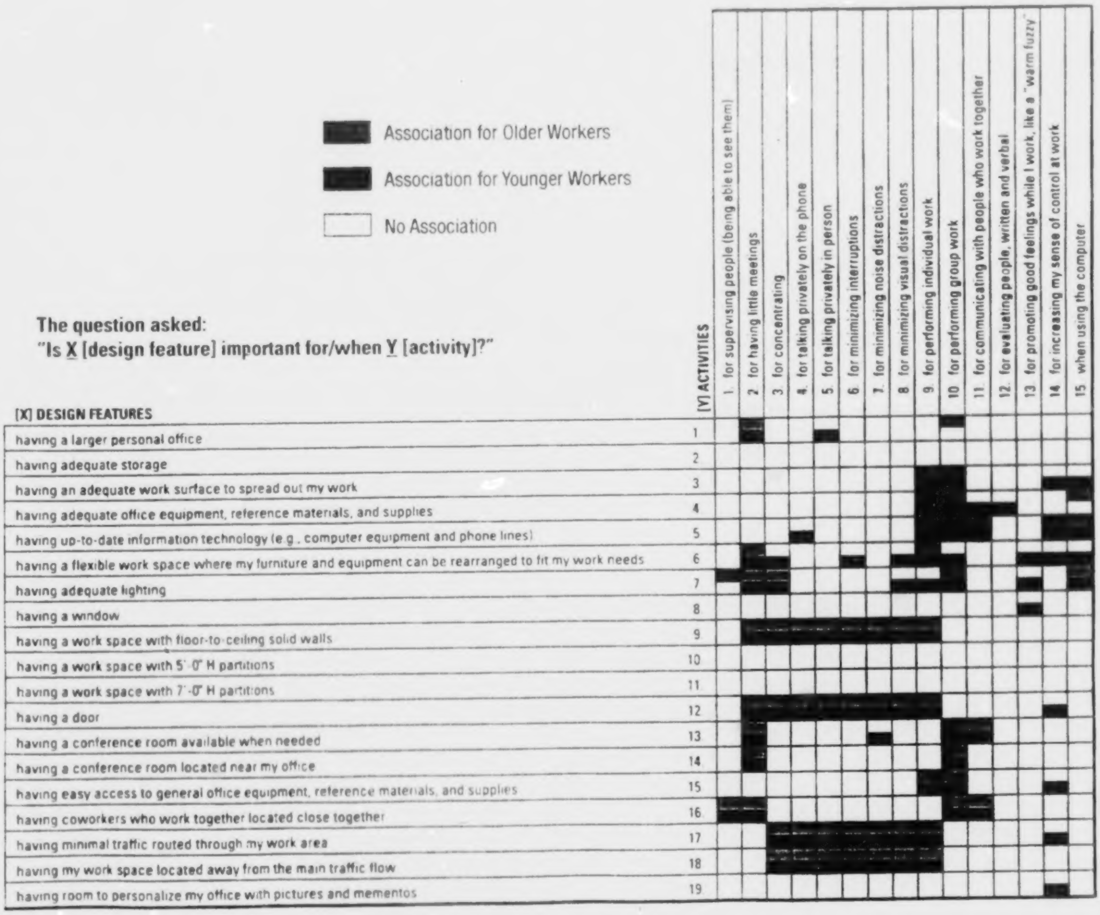
Categories 3-8 and 12 listed in Table 1 are common meanings found in the privacy literature on work environments. (See Justa & Golan, 1977; Kupritz, 1998, 1999; Oldham, 1988; O'Neill, 1994; Sundstrom, Herbert, & Brown, 1982; Zalesny & Farace, 1987.) Categories being able to concentrate, minimizing interruptions, and minimizing noise and visual distractions are examples of attempts to regulate outgoing information; and evaluating people, written and verbal, encompasses both retreat and information management.

Preference ranking. 24 hours of interviewing older and middle age workers in the Kupritz (1999) study did not elicit office design or privacy differences between cohorts, even with the physiological changes occurring in older workers. In order to investigate this finding further, the relative importance of individual design features was measured through preference ranking. Each cohort ranked the 19 design features, listed in the Beliefs Matrix, in order of their importance to conduct work. This part of the questionnaire asked the question, "What are the most important design features for you to have at work in order to perform your job?" Respondents took about 10 minutes to complete the preference ranking. Table 2 positions the mean rank of each design item listed in the Beliefs Matrix, per cohort. Rankings per design item were summed across all respondents and divided by the number of respondents per subgroup. The lower the mean rank the closer the design item is to being ranked first, or most important. The rank order reflects not only each subgroup's most important design items but also those deemed least important to facilitate performance. The Levene's Test for the Equality of Equal Variances did not produce significant F scores. As sample data supported the assumption of homogeneous variances, T tests were computed, however, computations did not reach significance for any design items.

Findings

The Beliefs Matrix and Preference Ranking analyses taken together determined the strength of association between design features and general work activities, the relative importance given to design and privacy features for performing work and where privacy fits into what is important to older and younger workers in their office environments. **Theoretical consideration #1-**Older and younger workers, in general, appear to perceive similar strengths of association between design features and work activities. Z scores reached significance for similar design features and work activities overall for both older and younger workers. (See Table 1.) Relationships were

Table 1
Beliefs matrix questionnaire: Measured association between design features (X) and work activities (Y)



■ Association for Older Workers
■ Association for Younger Workers
☐ No Association

The question asked:
"Is X [design feature] important for/when Y [activity]?"

[X] DESIGN FEATURES	[Y] ACTIVITIES	1. for supervising people (being able to see them)	2. for having little meetings	3. for concentrating	4. for talking privately on the phone	5. for talking privately in person	6. for minimizing interruptions	7. for minimizing noise distractions	8. for minimizing visual distractions	9. for performing individual work	10. for performing group work	11. for communicating with people who work together	12. for evaluating people, written and verbal	13. for promoting good feelings while I work, like a "warm fuzzy"	14. for increasing my sense of control at work	15. when using the computer
having a larger personal office	1		█			▄					▀					
having adequate storage	2															
having an adequate work surface to spread out my work	3									█	█				▄	▄
having adequate office equipment, reference materials, and supplies	4									█	█	▄	▄			▀
having up-to-date information technology (e.g., computer equipment and phone lines)	5				▄					█	█	█			█	█
having a flexible work space where my furniture and equipment can be rearranged to fit my work needs	6		█	▄			▄		▄	█	▄			▄	▄	▄
having adequate lighting	7	▀	█	█					▄	▄	█			▄		█
having a window	8													▄		
having a work space with floor-to-ceiling solid walls	9		█	█	█	█	█	█	█	█						
having a work space with 5'-0" H partitions	10															
having a work space with 7'-0" H partitions	11															
having a door	12		█	█	█	█	█	█	█	█					▄	
having a conference room available when needed	13		█					▄			█	█				
having a conference room located near my office	14		█								█					
having easy access to general office equipment, reference materials, and supplies	15									█	█				▄	
having coworkers who work together located close together	16	█	█								█	█				
having minimal traffic routed through my work area	17			█	█	█	█	█	█	█					▄	
having my work space located away from the main traffic flow	18			█	█	█	█	█	█	█						
having room to personalize my office with pictures and mementos	19														▄	

particularly strong for cohorts and clustered together regarding the design features 'having a work space with floor-to-ceiling solid walls, a door, minimal traffic routed through my area, my work space located away from the main traffic flow' and the general work activities, having little meetings, concentrating, talking privately on the phone and in person, minimizing interruptions, and minimizing noise and visual distractions, and performing individual work. At another level of analysis, many of these activities relate to privacy issues as described earlier. **Theoretical consideration #2-** Older and younger workers perceive similar weightings of importance for some design features needed to perform work, but not for others. Cohorts ranked 10 out of 19 design features the same or within one or two positions of each other. (See Table 2.) For example, 'having a larger personal office' was ranked 1st in importance by both older and younger workers to perform their work, 'having adequate storage' was ranked 4th in importance by both subgroups, and 'having adequate lighting' was ranked 6th in importance by older workers and 7th by younger workers. Particularly strong relationships for cohorts clustered together regarding certain work activities and design features when compared individually in the Beliefs Matrix. However, cohorts do not consider these design features necessarily as the most important workplace design characteristics when

Table 2
Mean rank for design items

OLDER WORKERS		YOUNGER WORKERS	
Design Item	**Mean Rank**	**Design Item**	**Mean Rank**
having a larger personal office	6.695	having a larger personal office	6.394
having up-to-date information technology (e.g., computer equipment and phone lines)	8.153	having an adequate work surface to spread out my work	7.623
having a work space with floor-to-ceiling solid walls	8.881	having adequate office equipment, reference materials and supplies	8.443
having adequate storage	8.898	having adequate storage	8.459
having an adequate work surface to spread out my work	8.932	having up-to-date information technology (e.g., computer equipment and phone lines)	8.885
having adequate lighting	9.542	having a flexible work space where my furniture and equipment can be rearranged to fit my work needs	9.197
having a flexible work space where my furniture and equipment can be rearranged to fit my work needs	9.661	having adequate lighting	9.213
having adequate office equipment, reference materials and supplies	9.881	having a work space with floor-to-ceiling solid walls	9.410
having a door	10.424	having my work space located away from the main traffic flow	10.262
having my work space located away from the main traffic flow	10.509	having room to personalize my office with pictures and mementos	10.689
having minimal traffic routed through my area	10.542	having a work space with 5'-0" H partitions	10.787
having a conference room available when needed	10.593	having a conference room available when needed	10.836
having a window	10.610	having coworkers who work together located close together	10.984
having a work space with 5'-0" H partitions	10.763	having a window	11.016
having room to personalize my office with pictures and mementos	10.881	having a door	11.115
having a conference room located near my office	11.034	having a conference room located near my office	11.148
having coworkers who work together located close together	11.051	having a work space with 7'-0" H partitions	11.164
having easy access to general office equipment, reference materials and supplies	11.220	having minimal traffic routed through my area	11.672
having a work space with 7'-0" H partitions	11.559	having easy access to general office equipment, reference materials and supplies	11.934

prioritized with other design items. On the other hand, cohorts did consider some design features that reached significance for certain work activities as some of the most important features needed to perform work. For example, 'having a work space with floor-to-ceiling solid walls' was ranked 3rd in importance by older workers and 8th by younger workers and 'having an adequate work surface to spread out my work' was ranked 5th in importance by older workers and 2nd by younger workers. **Theorectical consideration #3-** First, older and younger workers generally appear to perceive design features needed to perform basic job functions as most important to have at work, followed by certain design features associated with privacy activities. For example, 'having a larger personal office' was ranked by both subgroups as 1st in importance and 'having up-to-date information technology' was ranked 2nd in importance by older workers and 5th by younger workers. Cohorts connect some privacy activities with these design features. Younger workers associate 'having a larger personal office' with talking privately in person and 'having up-to-date information technology' with talking privately on the phone. Older workers rank 'having a work space with floor-to-ceiling solid walls' as 3rd in importance and associate this design feature with many privacy activities described earlier. 'Having a flexible work space where my furniture and equipment can be rearranged to fit my work needs' is ranked 7th in importance by older workers and 6th by younger workers who associate this feature with the privacy activities, concentrating and minimizing interruptions and visual distractions. 'Having adequate lighting' is ranked 6th in importance by older workers and 7th by younger workers. Both subgroups associate this feature with concentrating. Younger workers also associate this item with minimizing visual distractions. Second, older and younger workers appear to prefer different architectural privacy features to facilitate work. Architectural privacy refers to the visual and acoustical isolation supplied by the physical surroundings of an environment (Sundstrom, Burt, & Kamp, 1980). Cohorts generally perceived different types of design features associated with privacy as important for performing work. 'Having a larger personal office' was ranked 1st as most important by both cohorts to perform their work, however, only younger workers associated this design item with the privacy activity, talking privately in person. Even though relationships were particularly strong and clustered together for certain design features and privacy activities listed in the Beliefs Matrix, cohorts typically did not give similar weightings of importance. For example, cohorts strongly associated 'having a work space with floor-to-ceiling solid walls' with concentrating, talking privately on the phone and in person, minimizing interruptions, and minimizing noise and visual distractions yet this design feature was ranked 3rd in importance by older workers and 8th by younger workers. For the most part, even design features ranked less important by cohorts but related to privacy were not given similar weightings. Three exceptions were noted where cohorts gave similar weightings of importance (within one position of each other) for design features associated with privacy: 'having adequate lighting', 'having a flexible work space where my furniture and equipment can be rearranged to fit my work needs', and 'having my work space located away from the main traffic flow.'

Summary

The present findings indicate that cohorts prioritize certain design and architectural privacy features differently, even though older and younger workers generally associate similar design features with facilitating work activities. Older workers appear to need different physical features depending upon the design item (especially architectural privacy features). The findings suggest that design changes to the office may be necessary to provide older workers with the same opportunity as their younger counterparts to perform efficiently. This does not warrant heavy expenditures so long as Corporations initiate careful planning and foresight to provide compatible design needs. On the downside, if these needs are not met productivity may suffer. Many of the design needs of older workers can be accommodated by replacing certain rigid design features with more flexible features that allow workers themselves to manipulate physical elements of their workspaces when needed (e.g., providing a workspace where furniture and equipment can be rearranged to fit the worker's needs). Organizations should provide flexible environments that allow worker flexibility and control over their work environments. Flexible environments charge a low adaptive cost because workers can manipulate the physical setting to suit their own behaviors and particular work processes at that time. O'Neal and Carayon (1993) determined that individual and group control over the work environment can enhance employees' satisfaction with the environment and reduce stress. HRD professionals--who best understand how older and younger workers learn and practice new ways of working--can be teamed with design professionals to create work environments most conducive to work practices. Companies such as Hewlett-Packard and Owens Corning have teamed human resource professionals with design professionals to create work environments conducive to work practices. Jakabuwoski, a workplace strategist at Hewlett-Packard, explains the company's strategy: "When most organizations are designing office spaces, they need to consider their employees—their human resources—and the way those individuals do their jobs; and that means HR professionals are, or should be, included in the office redesign teams from the outset as a matter of successful business strategy" (Bencivenga, 1998, p. 69).

Providing a mix of work settings that are available to older and younger workers when needed further creates diverse environments that accommodate design differences as well as similarities. HRD professionals can work in concert with organizations to schedule space-time use of offices that support work practices of older and younger workers. This structuring of activities in space and time results in a mix of settings that individuals and groups experience each day: places for individual or group privacy; communication; team interaction; research and computer work; teleconferencing, etc. (Haworth, 1995; see also Brill, 1993). HRD professionals also can provide training tools on office protocols that support privacy needs for acceptable conversation levels in work areas and acceptable conversation and density levels in incidental meeting areas where colleagues are concentrating, cubicle etiquette (e.g., how loudly a person should talk on the phone), how to deal with interruptions, etc. Bencivenga (1998) urges human resource professionals to train employees on appropriate ways to work in today's work environments and to help employees establish rules or protocols for the workplace. This kind of training program empowers individuals and work groups by enabling them to modify their own social norms to manage privacy better in today's work environments. Corporations face complex decision-making as they attempt to accommodate workers with diverse design needs. The present study enhances their ability to target the most critical design areas that facilitate performance for older and younger workers. Recognizing cohort design similarities and differences alerts and directs HRD professionals and organizations to where they should channel their finite resources to facilitate work practices when training is planned, developed and evaluated. As stressed in the introduction, the physical surroundings of the workplace--as an integral part of organizational context--can impact the ultimate success or failure of a training intervention. Organizations can use this information to assess cost benefits and to evaluate alternative design solutions to support new ways of working back on-the-job. This potentially can prove cost effective to organizations as they strive to support workforce diversity.

Footnotes

1. The Kupritz (1999) study did not examine the symbolic value that workers attach to workplace design for status recognition, etc. as this was not the purpose of the study. The study specifically targeted physical attributes that impact worker efficiency; 24 hours of interviewing never elicited symbolic values of design as impacting work.

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Age and the University Workplace: A Case Study of Remaining, Retiring, or Returning Older Workers

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Trends toward longer working lifespans, include patterns of remaining, retiring, and returning. HRD practitioners need to include age in diversity discussions and re-examine career development and training and development opportunities. A framework was developed for considering aging issues from an HRD perspective using case study.

Keywords: Older Workers, Life Long Working, HRD Policy

Incentives for early retirement, increasing demands for workforce productivity, and a projected shortage of skilled and experienced workers are powerful societal forces shaping human resource management and development practices in the workplace. Demographics are creating a workplace in which the traditional notions of retirement may be replaced with another concept--life long working--working in various positions for varying amounts of time throughout adult life. In the next decade, workers over the age of 55 may exceed the number of new entrants into the workplace. Hale (1990) predicts that by the year 2000 the average age of the worker will be 40 years old as compared to 34 years old in 1980. A declining birthrate might result in a shortage of skilled and knowledgeable employees (Dychtwald, 1990) making the notion of retirement for older workers a serious drain on organizational resources. While early retirement incentives have contributed to the decline of expertise in the workplace, inflation, increasing health care costs, and inadequate pensions are propelling older adults to remain or re-enter the workforce past the traditional retirement age (Doering, 1990; Herz, 1995).

While some human resource development literature investigates the effects of workplace programs on new employees (Holton, 1996) and women (Wentling, 1996; Taylor-Carter, 1996), little attention is focused on the older adult in the work setting. Two decades ago, Sheppard and Rix (1977) forecast the changing nature of the workplace and suggested that keeping older persons in the workforce would make sound economic and social policy sense. As the workforce ages, the future imagined by Sheppard and Rix is becoming a matter of importance to HRD practitioners and scholars. In what ways can HRD create working environments supportive of the needs and capabilities of older workers? What are the needs and concerns expressed by older workers? In this paper we will present an HRD policy framework suggesting ways to create a workplace supportive of older workers.

While continued employment of older workers is socially and economically beneficial, the workplace is age sizing: a readjustment in the median age of the workplace to permit the flow of new ideas, promotion opportunities, and innovation (Lavelle, 1997). Aging myths persist that continued employment of older workers blocks career growth, lowers productivity, and stifles innovation. While human resource professionals value older workers for experience, stability, judgment, and work ethic, executive officers believe that older workers are not flexible, are critical of non-traditional work arrangements, and are not technologically competent (Hochstein, 1995). According to Lewis (1996) early retirement incentives are tools for hiring employees who may be more current and whose energy level may be higher than that of aging workers. This is based on two assumptions that older workers: (a) do not keep up with knowledge in their fields, and (b) do not have the physical or mental stamina to remain productive. H. Deets, Executive Director of the AARP, addressing human resource professionals, pointed out a bias toward hiring and retaining older workers, "You don't hire too many people after 45; you don't train too many people after 50; and if you have a downsizing, anyone over 55 is on the way out" (Deets, 1995). The California Supreme Court offered a ruling permitting companies to age size for economic reasons. The California Court of Appeals also ruled that age discrimination laws were not intended to harm organizations financially (San Gabriel Valley Tribune, 1997).

Age is notably absent from the discourse on diversity issues in the workplace for example a chapter entitled, "Diversity Issues in the Workplace," omits age from the discussion of organizational diversity issues.

> No longer are comments, jokes, or negative behaviors based on someone's race or ethnicity, gender, religion, sexual orientation, or physical ability acceptable in the workplace. Smart organizations are not

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> only making it clear but they are also providing opportunities to gain new skills in dealing with employees' diversity. (Kendall, 1995, p. 79)

Research Design

The embedded single-case design was used to explore the proposition that changing demographics means that workforce policy may have to change to encourage older workers to remain or return to the workforce. According to Yin, "the method of generalization is 'analytic generalization,' in which a previously developed theory is used as a template with which to compare the empirical results of the case study" (1994, p. 31). A large university provides a critical case illustrating the "contemporary phenomenon" of employment patterns of older workers in its "real-life context," (Yin, 1994, p. 13). The research question was: How is the university adjusting to the changes in the labor force? Two subsidiary questions were (a) Are there indicators that employees over age 55 are remaining or returning to the university labor force? and (b) What is the subjective experience of being an older worker in a university environment?

Data Collection and Data Analysis

Descriptive statistics were collected from the university to provide information on the numbers of older workers in each job classification past the age of 55. Documents were collected on all policies and procedures. Structured interviews were conducted at the respondents' work sites either in an office or a conference room and lasted between 45 and 120 minutes to provide insights into the effects of the policies on older workers' lives. Interview questions covered: current work situation, career patterns, career development opportunities, and perceptions of career patterns. The questions asked were: How do you define career? How many careers have you had? Why are you working? What is your attitude about retirement?

Snowball sampling (Patton, 1990) was used to find respondents who were currently employed and at least 55 because retirement eligibility begins then for most Midwestern University employees (OHR, 1999). We asked acquaintances who were longtime employees for suggestions. The case illustrates the experience of being an older worker in a specific context from different job classifications. Twelve respondents, six men and six women between the ages of 55 and 68, participated. The embedded units (Yin, 1994) of analysis were faculty, administrative, and civil service classifications (CCS). One of the five faculty members was a woman, one of the three administrators was a woman, and all four of the CCS employees were women. One CCS employee was Filipino, all other participants were European American. Within the categories of faculty and administration, four were full-time employees, while the others were retirees who had accepted anywhere from a 10% to 50% appointment. One faculty member from this group also held another part-time position outside the university.

Interview transcripts were read and checked against the tapes, read again with preliminary themes recorded and grouped by job classification. The themes of remaining, retiring, and returning appeared as patterns from a comparison of the chart and relationship outline, the discussions, and additional readings. Doering (1990) suggested these themes in his analysis of employment trends among older workers.

Emergent Themes

Our focus is not on the status of the respondents but on the comments they made relevant to each concept. The data suggest that older workers are in the workplace past the traditional age of retirement choosing to remain, retire, or return creating different patterns than retirement as the traditional permanent separation from work. A remaining worker meets the retirement qualifications of age and years of service but has chosen to continue working in a full or part-time capacity without a break in service. A returning worker has ended active paid work, experienced a period of retirement, and returned to a paid position. A retiring worker meets the age and service requirements electing to leave current work with no intention of returning.

Remaining

There was a marked difference between the responses given by classified civil service workers and those from faculty and administrators, especially regarding the financial considerations of retirement, the perceived value their work, and the university's response to a work force that is aging.

None of the respondents felt discriminated against with respect to their age. Three respondents (faculty) noted the uniqueness of the setting. Brad stated that "in a university setting, I suspect that in many cases the work of older workers is viewed in a very positive light" because in higher education "their expertise continues to be valued." Maggie felt that the institution's priorities were different from her own.

> I love working with students -I really enjoy that. I'm angry about the fact that doesn't seem to be rewarded here as much as doing research, which I also enjoy. But I don't think anymore, I enjoy it as much as my interactions with students. And whether that's a side effect of the aging process which of course I don't like to think is true or a side effect of having had my surgery and its taken a lot of my self confidence away. I'm not sure. I don't know whether that's a common pattern among us old farts or [not].

Jodi, (administrator, and faculty) agreed that what others think of older workers "depends on where you're an older worker." She continued, saying "we have lost through retirement; we have lost people who still had a great deal to contribute." Jodi, who was engaged in a casual job search, mentioned one consideration would be the number of productive years remaining. Eddie, a professor, learned that his wife, a high school teacher felt that "older teachers are not given the same status as younger teachers. Older teachers are looked at in terms of people who are going to leave the system and, therefore, don't get as much recognition or support as and regard from their colleagues as the younger people do." While, "I don't see that in terms of the university."

Classified Civil Service workers remained in the workforce "So I can eat and live. Does that make sense to you?" (Karen). Civil service workers did not make enough money to be comfortable with the idea of retirement. Karen explained,

> [Retire] Not yet, I could but it wouldn't be a very good retirement pay. So I'll work another one or two, anyhow it'll help out. Plus I have credit I'll buy back when I worked downtown for the state and I can buy some time back. That'll give me a better retirement.

May admitted to not planning wisely, and Muffy complained pay increases did not cover the increase in necessary deductions such as parking and medical. From a different perspective, administrator Bobby said that his financial planning was done leaving the details of the "career shift" of retirement. Bobby hadn't decided how to spend the majority of his time in productive "work."

> If somebody paid me the same salary to do nothing and don't go to work just stay at home just don't do anything, I would create work…something that was progressively satisfying, it would be a value added, return something, you know, to the society.

Amanda (CCS) said "people are living longer, and they're working longer…a few years ago an older person retired practically at 60, and that's it, or mothers always stayed at home" and if they did choose to go to work "some was necessary and some, they went to work to go to work to be doing something." The idea of no longer being productive was unacceptable to many of our participants. Civil service participants saw retirement as allowing more time for personal interests such as family, travel, reading, or other hobbies. Faculty perceived retirement as a "continuation" of professional endeavors and contributions to the field.

The gratification individuals received from their work, the appreciation of colleagues, their health, and their financial situation influenced remaining in the workforce, or a simple work ethic as Jodi said, "Why am I working? I couldn't not work". Remaining workers want financial planning assistance in preparation for reduced income, respect for their contributions, and to have meaningful work.

Retiring

Eddie (faculty) admitted, "retirement to me does not mean leaving my profession. [It means] freedom—release from systematic and routine obligations." Ryan echoed that sentiment, "I don't like to use the word retirement; I like to say career change." He elaborated, "I believe we should be continually doing something whether it's paid work, volunteer work, just keeping active doing things…" When interviewed he was an instructor (third career) having received his doctorate months before. He pursued his doctorate after retiring from twenty years in the Air Force (first career), and another twenty years teaching high school (second career). Maggy admitted that upon retirement she would miss the social and intellectual interaction with students. For Jake, "retirement isn't a clear concept…it's just a matter of where your checks come from." Jodi also saw retirement as a continuation of her current professional endeavors. Bobby reflected "I'm still trying to face up to what I want to do" as he considered retirement. Finally, Fred's career was an integral part of his life "I've always felt that as I worked I was living, and that I—my life wasn't separate from my work."

Discussion of early retirement buy-outs among older university employees revealed a number of motives for leaving the university including job dissatisfaction, the desire for change, or a new phase of life. The financial impetus behind the early retirement incentive was obvious to all of our participants believing it was done to cut costs without consideration of efficiency and productivity. As Maggy said "On the one hand that's good because maybe that means you can institute a lot of change that you couldn't have if they stayed." Earlier she was excited about changing her approach to teaching to meet the challenges posed by a new generation of students. Maggy observed, "I think some people think that older workers are a real jewel to be prized because they know so much about the field of education say, about the local context and the community, about the bureaucracy here."

Eliminating those "jewels" from the institution produced a loss of collective institutional history. Eddie believed the university was being irresponsible by "enticing older professors to retire" to "free up positions," and yet he anticipated his own retirement would provide him more opportunities to make valuable contributions. Staff were not included in the retirement buyout because of a shortage of experienced support staff. As Karen observed,

> Then what President … says now is that they don't want to get rid of any of their A&P or civil service cause they're kind of short on it anyway. So they're not going to do any buyouts for them. And they don't want everybody in that's inexperienced either. So it makes sense economically, but it seems they've been unfair when they offer this retirement buyout to this group and not to these two groups.

Karen explained "their policy here is rather discriminating. They have done buyouts for retirement for faculty and they won't do it for A&P or civil service staff anymore." She suggested that money would be saved on health care benefits by offering staff the retirement option because staff are more frequently in need of medical care.

Staff commented on another disparity in the system-- that CCS employees once retired couldn't be rehired. This is in direct contrast to the policy for faculty and administration, who can be rehired. Jake returning to work,

> [Thought] that some of the policies--the reemployment of people who retired--are punitive. You know the college has policies whereby they'll set a salary, but it's based on a reduction from what your retirement salary was. They start with 80% of what your retirement salary was and that's the new base they figure from, and then employ [you at] some percent of that. I work now for 40% of 80% of what my salary was last year. Which isn't very much, but, you know, I'm not doing it for the money and when you add the retirement benefit it's almost as much money as it was in terms of salary. But that's still a negative kind of message that comes from those sort of calculations.

Early retirement incentives draw older workers from the workforce at ages younger than the traditional retirement age. If the trend continues, by the year 2000, the average retirement age will be approximately fifty-nine, an age at which most adults could enjoy another fifteen to twenty five years of productive employment (Hale, 1990). Rix (1990) concluded that many adults continue to work at peak efficiency, with more variation within age groups than between age groups. Shea (1991) indicated that "age-related changes in physical ability, cognitive performance, and personality have little effect on workers' output except in the most physically demanding tasks" (p. 153). Among faculty in the sciences, age had a slight negative relationship to publishing productivity (Levin & Stephan, 1989). Some studies have shown a stronger negative relationship between age and work performance for non-professional and low-level clerical jobs than for higher level craft, service, and professional jobs (Avolio, Waldman, & McDaniel, 1990; Waldman & Avolio, 1993).

With an anticipated shortage of new entrants to the workforce by the year 2020 (Sheppard & Rix, 1977), corporations will need to assess the consequences to profits and productivity of encouraging talented elders to exit the workforce. Society needs to recognize all of the costs of supporting a non-working population capable of productive work, living healthier and longer lives. Respondents perceived inequities in retirement plans based on job classifications, wanted realistic previews of retirement, and skill enhancement in preparation for new opportunities.

Returning

Older adults are finding employment at the university as a second career or as a bridge job, a position between periods of retirement (Doering, 1990). Older adults as new hires is an extremely low percentage, this may become a trend as baby boomers enter the retirement eligible age. Many older workers want to continue working in some capacity after retirement to supplement income, for greater health insurance coverage, or to be a productive and a contributing member of society. Fred echoed the sentiments of other faculty and administrative respondents by observing, "in the education profession often you move from one challenge to a more demanding one that's the way you move up in the career" is ending one career through retirement. Staff respondents could not afford to retire or live on their salaries. Muffy complained, "when I'm working overtime here, it's costing me money, because I work a part-time job." None of the staff we spoke to had retired from one job or career to embark on another one.

Faculty and administrative contributions were perceived by the participants as more highly valued than those of civil service employees who were not offered early retirement buy-outs. Civil Service workers lacked the opportunity to retire and return in a complimentary capacity.

The university's response to older workers returning or remaining has been haphazard at best. Policies clarified the status of the "returning from retirement" worker and have provided additional benefits for older workers who remain as a by-product of meeting the needs of other groups redefining policies to accommodate a changing workforce (Fisher, 1993; Dellman-Jenkins, Bennett & Brahce, 1994). Faculty retiring under early retirement programs may 1) teach a course until a replacement is available or where there is a lack of competent instructors, 2) complete an externally funded program, or 3) continue research on a part time basis. The maximum level of re-employment is .50 FTE with limited benefits, and a negotiated salary that need not be based on prior earnings (Stoffel, March 18,1992, Recent Changes in Retiree Re-Employment Policy and Definition of Immediate Family for Sick Leave Policy). A 1996 change increased the number of work scheduling options to include: reduced appointments permitting flexibility during non-peak work periods, reduced time, providing a temporary reduction in hours in conjunction with a corresponding reduction in salary (Office of Human Resources Policy and Procedure Manual, Feb. 1,1996, #6.10).

Overall, university policies do not seem to be age biased. In fact, several respondents explained that certain policies changed over the years to be more accommodating such as the procedures for procuring disability parking stickers and regular parking stickers. One respondent was unhappy her raises did not cover her increasing health care costs because her doctors were not on the new list of providers. Eligible faculty appreciated the flexibility that came with early buy-outs and rehiring of faculty. The inability to rehire civil service employees when faculty could be rehired was a state policy not a University policy. Jake (faculty) found salary calculations for rehires punitive because it was based on 80% of previous salary.

The university might need to rethink allocating opportunities as well as changing the attitudes and expectations of managers and younger employees toward older workers (Paul & Townsend, 1993; Hassell & Perrewe, 1995). We found no evidence that inservice programs on aging issues were provided. An indicator of the value an organization places on investing in older workers is its allocation of training resources to older employees. Investments can be made in people or environmental adaptations to compensate for physiological changes due to aging. Work environments are being re-engineered to account for seasonal or contingent labor pools composed of older workers (Lastowka, 1995; Canter, 1995). Gooderham and Hines (1995) found a gradual increase in the number of older employees receiving training and development opportunities while the bulk of opportunities are offered to younger employees. While older workers' job performance compares favorably with younger workers (Sheppard & Rix, 1977), chronological age rather than functional age is the determinant of training opportunities (Greller & Stroh, 1995). Eyres (1996) cautions that "Age discrimination is prevalent in training cases. Although a lack of training is a legitimate basis for selection for layoffs, when the lack of training is age-related an indirect violation of the ADEA [Age Discrimination in Employment Act] can be found" (p. 196).

Few positions in our information society remain static. Education and job redesign are the means by which the older workers can enter, reenter, and advance at work. Respondents wanted more family friendly policies and training programs to assist with re-entry into the workplace.

Reflections

We began the study with a naive assumption that the university environment might be more supportive and respectful of older employees. This assumption seemed reasonable considering the tenure system and the guarantee of lifelong employment. We attempted to illustrate the meaning of growing older by those employees who have reached the age of fifty-five or older in a university environment. Aging is experienced differently depending on gender, position, and ethnicity. Our respondents described an environment in which aging is rewarded among the faculty but devalued among the administrative and civil service classifications. Conflict within the university ranged from policies designed to attract older professors to retirement and reduce personnel costs to a university coping with ways to retain expertise developed through experience. In some cases, seniority is rewarded through ease of accessing university services. Our respondents indicated the continuing importance of work as a means of staying engaged and continuing to contribute to the community. However, work as contribution was more often found among the faculty than among civil service staff. Civil service staff equated the necessity to work with lack of funds to retire. Our interviews hint at culturally determined meanings of work and retirement.

Human Resource Development Implications

Older workers exhibit different work patterns at different stages of life-long working. The workplace becomes a dynamic space for older workers. Rather than a unidirectional journey leading to retirement HRD practices for older workers should be situated in the dynamic pattern of periods of active employment, disengagement, and re-entry into the same or a new career.. An HRD perspective for the third stage, the working life beyond the traditional retirement age, will view the older worker as an active agent negotiating various roles within the workspace. The roles, depending on life circumstances, might include the decision to remain in, retire from, or return to periods of part time, full time, or part season work challenging HRD practitioners and scholars to develop training, career development, and organizational development strategies appropriate to a third stage of working life.

Older workers are a differentiated employee group with different workplace issues suggesting an HRD framework that combines functions with employment patterns. Table 1 combines the components of HRD: training and development, career development, and organizational development with the working patterns of remaining, returning, and retiring. The framework is useful for evaluating issues of age during policy development in each intersection of HRD component with work pattern.

Table 1
Age and HRD Policy Development: Issues to Consider

	T&D	CD	OD
REMAINING	Is age discussed as a diversity issue?	Are there opportunities to change jobs within the organization?	Are there implicit barriers to promoting older workers?
RETIRING	Are there learning opportunities to prepare for retirement?	Is there opportunity to prepare for life after this workspace/career/job?	Are there policies to permit flexible employment patterns for gradual disengagement?
RETURNING	Are there training programs to assist with re-entry to the workplace?	Are investments made in skill development for future employment?	Do policies facilitate and or actively recruit older workers to the workplace?

A workplace, which blends training opportunities, flexible employment patterns, and policies supportive of the life needs of an aging workforce, may become a workplace that embraces older workers as capable, productive, and knowledgeable lifelong workers. The quality and sensitivity of a workplace's human resource development program might be measured by the extent older workers receive the support necessary to maintain challenging, responsible, and meaningful work. An aging workforce might influence workplace cultures and values in ways that change our notions of the meaning and necessity of work.

An investigation of the meaning of work in the lives of older workers is fertile ground for future research studies. HRD practitioners might explore strategies that are more effective and delivery systems for providing career guidance to older adults making transitions to part time work, returning from periods of retirement, or contemplating leaving the workforce. Flexible schedules, job sharing, reduced loads and seasonal employment (e.g. teaching summer sessions) may be redefined in the context of a changing and aging workforce. Notions of full-time, part-time and career work usually applied to the 18-65-age workforce may need to be reexamined in light of employees working beyond the eighth decade of life. Building intergenerational work teams would enhance organizational development. The effect on productivity of intergenerational work teams is an area of future research and will require creative ways of blending training opportunities, flexible employment patterns, and policies supportive of the life needs of an aging workforce.

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Access to Work for College Graduates with Disabilities in the Twin Cities Metropolitan Area

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Changes in the organizational behavior and the role of HRD are examined in facilitating access to work for college graduates. The organizations readiness to hire and retain graduates with disabilities is studied. The implementation of accommodations as mandated by the Americans With Disabilities Act is also described.

Keywords: Access to Work for Persons with Disabilities; Organizational Behavior; Training and Disability

Persons with one or more disabilities totaled about 43,000,000 in the United States at the beginning of the 1990's, which represented about 17 percent of the total population (Americans With Disabilities Act, 1990; Pfeiffer, 1993). They face more barriers in accessing a job, or advancing in their career path, than persons without disabilities. In the workplace, persons with disabilities may require reasonable accommodations to perform the essential functions of their jobs. Accommodations, however, are not always provided, resulting in an increasing number of persons with disabilities who are less likely to advance (Bruyère, Brown, & Mank, 1997; McAfee & McNaughton, 1997), or cannot retain their job.

Students with disabilities are attending post-secondary and higher education at increasing rates. According to Gilson (1996), 8.8% of freshmen in 1991 reported having some type of disability; in 1993 4.8% of students attending public 4-year colleges had disabilities, and the rate was 4.4% of those attending independent 4-year colleges. In 1994, 9.2% of all freshmen reported some disability. "Of all graduate and first-professional students in 1993, 4% reported having a disability, with 16% of these students having multiple disabilities" (Gilson, 1996, p. 264). Different studies also report increasing number of college students by specific disability, like deaf or hard of hearing (Petty & Kolvitz, 1996), or through non-traditional means like the internet (Amtmann & Johnson, 1998).

A survey of Americans with disabilities indicates that two-thirds of Americans with disabilities between the ages of 16 and 64 were not working, although 79 percent of them reported that they want to work. (Szymanski, Ryan, Merz, Treviño, & Johnston-Rodríguez, 1996). Labor market participation for people with disabilities appears to be a complex phenomenon. It influences of trends in the labor market as well as the work structure, and the organization behavior and culture.

The policy goal of the Americans With Disabilities Act (ADA) was to reduce those barriers, therefore allowing more persons with disabilities to have access to work. Has this situation changed with the implementation of the ADA, with the advancement in technology, and with the expansion of the economy resulting in more employment opportunities? Have organizations changed their organization structure and culture so as to make work accessible for persons with disabilities? Is there a significant shift in the organizations practices to accommodate persons with disabilities?

Is the situation for college graduates with disabilities any different? Specifically, what are the chances today for a college graduate with disabilities to obtain a permanent job? Has increased access to college education for persons with disabilities resulted in increased opportunities for employment?

Problem Statement and Theoretical Framework

With the increasing number of persons with disabilities graduating from college, there is an expectation about those persons getting jobs in the market at increasing rates. There are several indications, however, that students or persons with disabilities in general still face several disability-related obstacles when seeking employment. To increase access to work for college graduates with disabilities, accommodations need to be made at the workplace. But as essential as accommodations, changes are also required in the organizational behavior (in the form of employment policies), and in the organization structure and culture.

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The problem is thus defined as the lack of organization readiness to incorporate, retain, and promote college graduates with disabilities into the workplace and the potential role human resource development can play.

This problem is crucial from the perspective of protecting persons with disabilities from social and economic discrimination. One of the most important basis of the ADA is that it acknowledges the existence of systematic barriers to a group, rejecting the idea that organizations are neutral work environments ruled by economic and technological forces (Harlan & Robert, 1998). The core definition of Human Resource Development (HRD) as being "a process for developing and unleashing human expertise for the purpose of improving performance" (University of Minnesota, quoted in Swanson, 1998) demands that HRD be engaged.

Access to work draws on three different theoretical frameworks. The first is the values approach, which analyzes the different stages the US society has gone through concerning disability--from the functional limitation, to the medical impairment, to the independent living movement (Wilkinson & Dresden, 1996), and self-determination (Miller, 1997). The second is the understanding of disability as a type of civil rights (Pfeiffer, 1993; Conley, 1995; Johnson, 1999). Accordingly, disability, as defined by the social theory of disability, is an outcome of social attitudes, institutions, and social structures (Harlan & Robert, 1998), and it has followed the path of other civil rights in terms of recognition.

The third approach analyzes access to work from the economics perspective. It has been said that the passing of the ADA, the promotion of access to work, is an intervention on the free interaction of forces in the labor market. Burkhauser, Butler, & Kim (1995) have noted that at the basis for the policy set-for by the ADA there is a recognition of the failure in the employers' side to incorporate and expand the performance of persons with disabilities. There are also those that perceive disability, the ADA and the required accommodations as paternalistic. Weaver (quoted by Conley, 1995) proposed an economic, incentive-based approach, which would translate in deregulation of employment opportunities for persons with disabilities, therefore reinstating the free interaction of forces in the labor market.

Yet, another approach is based on the organizational behavior theories. It looks at access to work from the perspective of the organizational readiness for change and the individual in the organization. This translates into the extent to which organizations are willing to use and develop the human capital of persons with disabilities.

Research Questions

To address issues regarding the readiness of organizations to accommodate college graduates with disabilities, research was conducted at Disability Services at the University of Minnesota. The main purpose was to explore how, and if, organizations have introduced changes at the organizational level to accommodate and work with college graduates with disabilities. The stated assumptions were that, even though nine years have elapsed since the implementation of the ADA, organizations still do not have the necessary information about persons with disabilities, that they do not have information and/or experience implementing accommodations, and they have not changed the organizational behavior and structure necessary to transform the organizational culture so as to incorporate persons with disabilities.

The research then aimed at examining the current conditions of college graduates gaining access to a job for which the research focused in two broad areas--what the organization's level of knowledge is about college graduates with disabilities, and what the organization's practices are with respect to working with college graduates with disabilities. Specifically, the research questions were: a) have organizations introduced changes regarding persons with disabilities after the passage of the ADA?, b) have those changes resulted in a meaningful impact at the organizational behavior level, or are those changes related to a basic compliance with the ADA?, and c) have those organizations experienced a significant shift in their practices to accommodate persons with disabilities?

Although the research focused on college graduates, the primary interest for a higher-education institution, it was inevitable to include all persons with disabilities when gathering and analyzing the data. Graduates are not necessarily recognized as such when entering the job market, and graduates may have not disclosed their disabilities when hired, which leaves reporting data open for all persons with disabilities that do disclose their disabilities.

Research Method

This descriptive research was conducted in the context of the Access to Work Model Demonstration Project (Project #H078C70029) carried out at Disability Services, University of Minnesota. The Model Demonstration Project included interaction with faculty, organizations, and students to examine major issues concerning access to work for college graduates with disabilities--e.g., experiential learning, barriers, disclosure, information level, and training. The project's goals were to increase knowledge about those issues, and also increase knowledge and comfort level of employers through developmental training. Therefore, the research that is reported here is complementary to those other activities. Other research methods were used in the project as well, including interviews and focus group techniques. Analysis of that information was used to the design and collection of data contained in this paper.

This research used data collected through two surveys that had been created by Disability Services at the University of Minnesota: "Access to Work" (Disability Services, University of Minnesota, 1998a), and "Organization Needs Assessment" (Disability Services, University of Minnesota, 1998b).

Both surveys were created based on the knowledge of the professionals working on the program, as well as their experience working with college students with disabilities. The surveys cover a representative set of items related with disability and access to work. Before being sent to respondents, both surveys were analyzed by consultants working with Disability Services. The surveys were also piloted with different organizations prior to and during the implementation of the project. Responses in these latter cases were studied to provide organizations with technical consultation regarding disability issues, and to reflect upon information gathered through interviews. Successive responses were used to adjust their content. Whenever sent to organizations, they were responded in the context of training sessions or any other technical consultancy provided by Disability Services through this project. Those responses, however, are not included in this research. Only the final versions that were sent to the sample for the purpose of this research are reported here. The surveys state the questions we try to address in this research--what and how have organizations changed after the adoption of the ADA so as to facilitate access to work for college graduates with disabilities.

The first survey (hereinafter, the "Staffing and Training" survey), gathered basic descriptive data regarding the organization's policy development in disability issues (α reliability coefficient .62), training on disability-related topics (α reliability coefficient .89), and accommodation implementation. This survey was sent to a total of 237 Human Resource managers or staff in organizations in the Twin Cities Metropolitan Area (the Twin Cities Metropolitan Area is comprised of Minneapolis and Saint Paul, and cities in the seven-county surrounding area). The mailing list was acquired from their professional association with a one-time permission to use it, so no follow-up could be used. Thus, this survey was the first contact between Disability Services and those organizations. The response rate was 27% (N=64). For-profit, not-for-profit, and public organizations were included in this group. The type of organization was identified by respondents--there was not prior identification.

The second survey (hereinafter, the "Organization Needs Assessment" survey) had a different purpose. The survey asked specifically about whether the organization sought information about ADA after the law was passed. It also measured the experience the organization had with different disabilities students disclosed or that were visible (α reliability coefficient .91). Finally, it measured the experience of the organization implementing accommodations for persons with disabilities (α reliability coefficient .84). This survey was sent to a list of managers, professionals, and other personnel of 394 organizations also located in the Twin Cities Metropolitan Area. The mailing list was acquired from the University of Minnesota's Office for Special Learning Opportunities, which has a close cooperation with Disability Services. This office maintains a mailing list of several organizations in the Twin Cities with which they interact for learning activities. Therefore, most of these organizations had previously collaborated with Disability Services in disability-related issues in this project and others. The response rate was 35% (N=138). As in the first survey, for-profit, nonprofit, and public organizations were included in this survey.

Both surveys were sent at the same time--May 1999. Each copy of the survey had no space for identifying the respondent, but a coded-number was used to process data. The envelope containing the survey included an invitation letter to participate in the research, which also ensured confidentiality of the responses. To facilitate the response, organizations in the mailing lists were given a self-addressed envelope to use to return answered surveys. After 20 days of the initial mailing, non-respondents were sent a follow-up card with another self-addressed envelope to increase response rate.

Research Results

The Staffing and Training Survey

The first area this survey explored about the organization's knowledge on disability-related issues was policy development. Three major types of policies were addressed--the implementation of written nondiscriminatory policies, the adoption of written guidelines about availability of disability accommodations, and the adoption of procedures for implementing accommodations requests.

Table 1. Organizations and Disability-Related Policy Development (Percentages)

Policy Type	*All Organizations*	*For Profit*	*Nonprofit*	*Public*
Written Nondiscriminatory Policy (N=61)	91.8	91.3	87.5	100.0
Written Guidelines About Availability of Disability Accommodations (N=58)	51.7	46.5	50.0	85.7
Established Procedure for Implementing Accommodations Requests (N=61)	57.4	56.5	37.5	85.7

Table 1 summarizes the information about the organizations that have established policies in those areas. In general, a great majority of the organizations surveyed (91.8%) indicated they have adopted written nondiscriminatory policies in the workplace. That number drops substantially to about half of the organizations about adopting policies regarding availability of accommodations (51.7%) and how to proceed whenever a request for accommodations is made (57.4%). In both cases, public organizations appear to have more implementation of these policies.

Table 2. Organizations and Training of Human Resource Staff, Supervisors, and Employees (Percentages)

Training Type/Group	*Not at all*	*To a small extent*	*To some extent*	*To a great extent*
Training HR Staff on Implementing ADA (N=60)	10.0	11.7	65.0	13.3
Training HR Staff on Interviewing Candidates with Disabilities (N=59)	13.6	25.4	32.2	28.8
Training Supervisors on Implementing ADA (N=59)	28.8	30.5	33.9	6.8
Training Supervisors on Making Reasonable Accommodations for Persons with Disabilities (N=58)	27.6	25.9	34.5	12.1
Training Supervisors on Conducting Performance Appraisals for Employees with Disabilities (N=56)	46.4	25.0	19.6	8.9
Training Employees on Interacting with Co-workers with Disabilities (N=60)	43.3	28.3	20.0	8.3

This survey also examined training on disability issues. For this purpose, questions focused on three groups of people within the organizations--human resource staff, supervisors/managers, and training for employees. The majority of the organizations appeared to have training programs for their human resource staff for either implementing ADA (90.0%) or interviewing candidates with disabilities (86.7%). Conversely, those organizations that did not have any training at all on these issues are around 10% (Table 2).

Less training is reported when it comes to training of supervisors. The number of organizations training supervisors, from a small extent to a great extent, on implementing the ADA represented 71.2%, and 72.4% in the case of training for making reasonable accommodations for persons with disabilities. Conversely, those organizations that did not provide training at all in these matters showed a higher number (28.8% and 27.6%, respectively).

However, it is the supervisors training on conducting performance appraisals for employees with disabilities that seems to be less frequent--only 53.6% of the organizations reported some sort of training in this area, versus 46.4% of organizations that reported not training at all. Similarly, less training is reported about training employees to interact with co-workers with disabilities. About 57% of all organizations responded as having had some type of training for their workers on this issue--and only 8.3% did that type of training to a great extent. But 43.3% of the organizations surveyed responded in the complete negative sense--they have not had this training at all.

Finally, the third major area those organizations were surveyed on was the implementation of accommodations for college graduates/employers with disabilities. The intent here was to gather initial information about the organizations' experience in dealing with employees with disabilities and implementing accommodations. A short list of accommodations was provided to organizations. With this respect, those organizations showed less experience implementing accommodations. By far, making work schedule flexible is the type of accommodation organizations experienced the most (42.6%).

Table 3. Accommodation Implementation in Organizations (Percentages)

Accommodation Type	*%*	*Accommodation Type*	*%*
Special or Modified	39.3	Readers/Interpreters	14.8
Job Restructuring	27.9	Modified Training Materials	4.9
Job Transfer/Reassignments	23.0	Modified Job Examinations	6.6
Flexible Work Schedules	42.6		

The Organization Needs Assessment Survey

This survey had a somehow different purpose, and contained fewer questions that targeted three major areas. The first one was a rather simple and direct topic--if the organization sought information on ADA after this law was passed. In general, the response is high (73.1%), although some variations can be seen within each category of organizations (Table 4).

Table 4. Organization and Information on the Americans With Disabilities Act (Percentages)

Organization Type	*Sought Information after ADA was Passed (%)*
For Profit	53.3
Nonprofit	76.4
Public	87.5
All Organizations	73.1

The second area deals with the organization's or program's experience working with students with disabilities, for which respondents were given the opportunity of responding to selected types of disabilities. It appears to be that organizations had more experience working with students with learning disabilities. In a 4-point scale, with 1 being "never" and 4 being "have worked with those students many times", they responded as having had experience "once or twice" (choice number 2 in the scale) with this particular type of disability. Table 5 provides a summary of the information about the experience with the disabilities listed in the survey and the respective means.

Table 5. Organization's Working Experience with Students/Employees with Disabilities (Mean)

Disability Type	*Mean*
Learning Disability	2.1
Psychiatric Disability	2.0
Mobility Disability	1.9
Chronic Illness	1.8
Deaf/Hard of Hearing	1.7
Blind/Low Vision	1.6
Head Injury	1.3

The other major issue was the organization or program experience implementing accommodations, for which the respondents were also given a list of 17 different types of accommodations. In this case, means are high for different accommodations listed in Table 6. In a 4-point scale with 1 being the organization "having little information or knowledge about the accommodation", 2 being "unsure how to implement this accommodation", 3 "have had difficulty implementing the accommodation", and 4 being the organization "made the accommodation successfully", the most notorious accommodation implemented is accessible parking (mean 3.7). Other accommodations that relate to physical mobility ranked also high--ramps, accessible doorways, grab bars, and power doors. Nonphysical accommodations like flexibility in schedule and deadlines ranked also high.

Table 6. Organization's Level of Experience Implementing Accommodations (Mean)

Accommodation Type	*Mean*	*Accommodation Type*	*Mean*
Accessible Parking	3.7	Moving Materials to Lower Shelves	2.8
Ramps	3.6	Sign Language Interpreters	2.7
Accessible Doorways	3.6	Program Relocation	2.6
Flexible Work Hours	3.6	TTY/TTD	2.5
Flexible Deadlines	3.2	Staff Readers	2.5
Grab Bars	3.1	Adapters	1.9
Responsibilities Restructuring	3.1	Voice-Activated Computers	1.5
Attitude Monitoring	3.1	Speech Output Computers	1.4
Power Doors	2.8	Others	2.0

Discussion and Conclusions

Two major conclusions can be drawn from these two surveys: knowledge and training about disability issues seem to be concentrated, still, in the realms of human resource staff, and there seems to be a disconnect between the type of disability with which the organization has had experience, and the accommodations implemented in the workplace.

Data collected suggest organizations are dealing with disability-related issues still at a basic level. Policy development information, as well as data on training corroborate that organizations are restricting the issue of disabilities to some levels within the organization. This may suggest that to the degree of experience these organizations have with persons with disabilities, they are having a compliance approach to disabilities.

On the other hand, data on experience working with students with disabilities show that organizations appear to have had relevant experience with disabilities that are not visible and would require a disclosure on the part of the student/employee--i.e., learning disability, psychiatric disability and to some extent chronic illness. On the other hand, that experience would relate to some extent only to the type of accommodations they implemented--e.g., flexible work schedule and deadlines, and responsibilities restructuring. However, there is a strong emphasis on physical-related accommodations, which may suggest again the organization's culture with respect to disabilities as well as a compliance issue.

These conclusions suggest that although some efforts have been undertaken in those organizations, little changes have been made at the organizational behavior and culture level that could mean s significant shift in practices. On the one hand, changes seem to be not rooted yet in the structure of those organizations, and that the issue of accommodation implementation would require more significant efforts. On the other hand, at the organization culture level, more changes are needed so as to trickle down the awareness about disabilities. Leaving disabilities as an almost exclusive topic of HR staff is an example of an area where the culture of the organization needs a change.

Research Contribution to Knowledge in HRD

This research's contribution to knowledge and practice of HRD can be approached from different perspectives (see Freeburg, 1994). It requires a systemic analysis of the organization. One of the assumptions frequently made is that all workers are equal. A systemic analysis does not only mean that all functions and jobs are properly related in the organization, and that jobs and tasks need to respond to the organization's goals--a systems approach requires a thorough understanding of differences and disabilities. This topic is crucial when aligning human capital with the overall strategy of the organization. As with any other employees, investing and retaining the human capital of employees with disabilities avoid turnover and related costs. Persons with disabilities constitute the most educated minority group, and yet it goes mostly untapped in the labor market.

Organizational behavior and culture, through policies implemented at the organization level, needs to move to a more comprehensive approach. Changes in the organizational culture are needed in order to transform not only attitudes towards disabilities, but to be competent in disability related issues--as with other expressions of diversity in organizations. An example that comes from the data collected is the need to make training materials available for persons with disabilities. From the perspective of a person with disabilities, if the organization is competent with disability issues, that would add his or her chances to increase performance as any other worker. Implementing accommodation also becomes a key subject for increasing performance through changes in the organization's culture and structure. There are several examples regarding accommodation and organizational culture change: through total quality management (Bruyère, Brown, & Mank, 1997); through changes in the workplace environment (Westmorland, Zeytinoglu, Pringle, Denton, & Chouinard, 1998); by dealing with specific accommodations like visual impairment (Scadden, 1997), traumatic brain injury (Hirsh, Duckworth, Hendricks, & Dowler, 1996), or spinal cord injury (Dowler, Batiste, & Whidden, 1998); and through the use of assistive technology (Brown, 1992; Galvin, 1997; Senge, 1997).

Part of the need for change in the organization's culture is the required change in awareness towards disabilities. This research has presented the evidence of training being mostly concentrated in a specific sector of the organization--the HR staff. However, if the organization is to be inclusive and systemic to improve performance, training in disability-related topics needs to be expanded beyond the realms of the HR staff. That might also avoid employees with disabilities to lose their jobs or to work sporadically only, because all supervisors and co-workers--not only HR staff--will work more effectively with employees with disabilities.

This issue is critical for HRD, and efforts towards organizations culture change, and strategic planning should consciously involve persons with disabilities. However, more research is needed in most of the areas in HRD--e.g., team building, leadership, conflict management. Other research may be approached from the need for changes in practices at different levels--e.g., task bundle, performance appraisals. Whatever the area is, it remains clear that the central area for change is the organizations' culture.

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A Systems Model for Evaluating Learning and Performance

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In this paper we describe a model for evaluating learning and performance that takes into account not only the processes of evaluation, but also the internal and external variables that affect the design and implementation of an evaluation, as well as the use of its findings. The proposed model is grounded in the belief that evaluation can facilitate and support individual, team and organizational learning, and that HRD professionals should assume the role of internal evaluators.

Keywords: Evaluation, Performance Measurement, Assessment of Learning

With increasing frequency, learning and performance professionals are being asked to evaluate the effectiveness and impact of their efforts (Bassi, Benson, & Cheney, 1996; Bassi & Lewis, 1999; Brown & Seidner, 1998). As Phillips (1998) notes, "Although organizations have focused much attention on evaluation in the past 40 years, only recently have organizations taken a systematic and comprehensive approach to evaluating training and development, human resource development, and performance improvement initiatives" (p. 1). The urgency to evaluate has emerged from both internal and external customers who are asking for evidence of programs' effectiveness and contributions. The demand for, and interest in, systematic and useful evaluation results are occurring not only in for-profit organizations, but in non-profit and local, state, and federal agencies as well.

While we believe this increased attention to evaluation represents an extremely important development, it has presented HRD professionals with a significant challenge. First, few trainers or other learning and performance practitioners have any formal education or training in the philosophies, theories or technical skills of evaluation. Most HRD professionals know what they know about evaluation from either taking brief workshops on the topic, or through their experiences with evaluation on the job. Few are aware that evaluation constitutes a profession with its own history, theories, and standards. Nor do they know that professional evaluation organizations exist all across the world (e.g., American Evaluation Association, Canadian Evaluation Society, Australasian Evaluation Association, European Evaluation Society). The second dilemma trainers face is that the models on which they've relied to conduct evaluation are far too simplistic and vague to guide them in the kinds of evaluation work now being required (Hilbert, Preskill & Russ-Eft, 1997).

For example, Donald Kirkpatrick's four-level evaluation model (1959 a, b; 1960 a, b; 1994), developed over 40 years ago continues to offer HRD practitioners and researchers little more than a taxonomy of evaluation categories. Ask almost any trainer and they know that Level 1 means measuring a participant's reactions to the learning event; Level 2 is associated with measuring how much participants' learned; Level 3 relates to determining the extent to which participants' on-the-job behavior has changed as a result of the training; and Level 4, the holy grail of all training evaluation, concerns measuring the results of the learning intervention on the organization, otherwise referred to as cost-benefit analysis or measuring the return-on-investment.

While others have attempted to expand on Kirkpatrick's model over the last four decades (Brinkerhoff, 1989; Hamblin, 1974; Holton, 1996; Phillips, 1995), none has provided a comprehensive, systems-approach, practitioner-oriented evaluation model. If HRD professionals are to demonstrate the effects of their efforts, then they must be provided with the necessary knowledge and tools to competently evaluate their programs, products, processes, services, and systems. In essence, they must become internal evaluators.

What follows is an evaluation model that we hope will take HRD professionals to the next level of conceptualizing and practicing evaluation within their organizations. In the following pages we outline the questions that guided the model's development, describe its theoretical underpinnings, and explain each of the model's components. We conclude with our ideas on how the evaluation model may contribute to new evaluation practice and research.

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Theoretical and Research Questions:

The model's development grew out of the following questions:

1. What are the necessary components of a comprehensive systems-approach to evaluating learning and performance within organizations?
2. What system-wide variables affect the evaluation of learning and performance efforts within an organization?
3. How should evaluation be practiced within an organizational context?

Theoretical Framework

The evaluation model we propose is based on the philosophies, theories and practices in the fields of: 1) evaluation, 2) organizational learning, and 3) systems theory. While several definitions of evaluation have been offered in the evaluation literature (see Patton, 1997; Rossi & Freeman, 1985; Scriven, 1967, 1991), the model presented in this paper is based on the following understanding of evaluation:

> Evaluative inquiry is an ongoing process for investigating and understanding critical organization issues. It is an approach to learning that is fully integrated with an organization's work practices, and as such, it engenders (a) organization members' interest and ability in exploring critical issues using evaluation logic, (b) organization members' involvement in evaluative processes, and (c) the personal and professional growth of individuals within the organization. (Preskill & Torres, 1999, p. 1-2)

Implied in this definition is the notion that evaluation is a *systematic process*. It should not be conducted as an afterthought; rather, it is a *planned and purposeful activity*. Second, evaluation involves collecting data regarding questions or issues about society in general and organizations and programs in particular. Third, evaluation is seen as a *process for enhancing knowledge and decision-making*, whether the decisions are related to improving or refining a program, process, product, system, or organization, or for determining whether or not to continue or expand a program. In addition, evaluation involves some aspect of *judgment about the evaluand's merit, worth or value*. Finally, the notion of *evaluation use* is embedded in all evaluation activity.

In the last decade, many organizations have embraced the concept and practices of *organizational learning* in an effort to respond to constantly changing global economic, technological, and social conditions. Fiol and Lyles (1985) define organizational learning as changes in the organization's cognition or behavior. This learning represents itself in "the development of insights, knowledge, associations between past actions, the effectiveness of those actions, and future action" (p. 811). Thus, we believe that evaluation can be the mechanism for inquiring into a problematic situation on the organization's behalf (Argyris & Schon, 1996), and for helping organization members grow and learn as a result of such inquiry.

Our model has also been strongly influenced by the concepts of *systems theory* and *systems thinking* (Senge, 1990; Wheatley 1992). Adopting a systems perspective means that we look at an organization as a set of interrelated parts and interconnected systems, which are dependent on one another and influenced by each other. As Senge (1990) explains, "It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static 'snapshots'...it is a discipline for seeing the 'structures' that underlie complex situations, and for discerning high from low leverage change" (p. 68-69). A systems approach to organizational learning and change acknowledges that an organization is,

> Interacting with its environment and has to adapt to it and permanently change in order to survive...The organization is conceptualized as an information processing system, a systems which performs certain necessary functions such as the generation of information, as well as the diffusion, the storage and the utilization of this information...This systemic approach aims at describing the way an organization can learn as a system" (Finger & Brand, 1999, p. 138).

Therefore, information is a core element of organizations that learn. Emphasizing the role of information in organizations, Wheatley (1992) passionately writes, "The fuel of life is new information-novelty-ordered into new structures. We need to have information coursing through our systems, disturbing the peace, imbuing everything it touches with new life" (p. 105). Since evaluation provides information for decision-making and learning, we believe that evaluation can serve a critical role in organizations.

A Systems Model of Evaluation

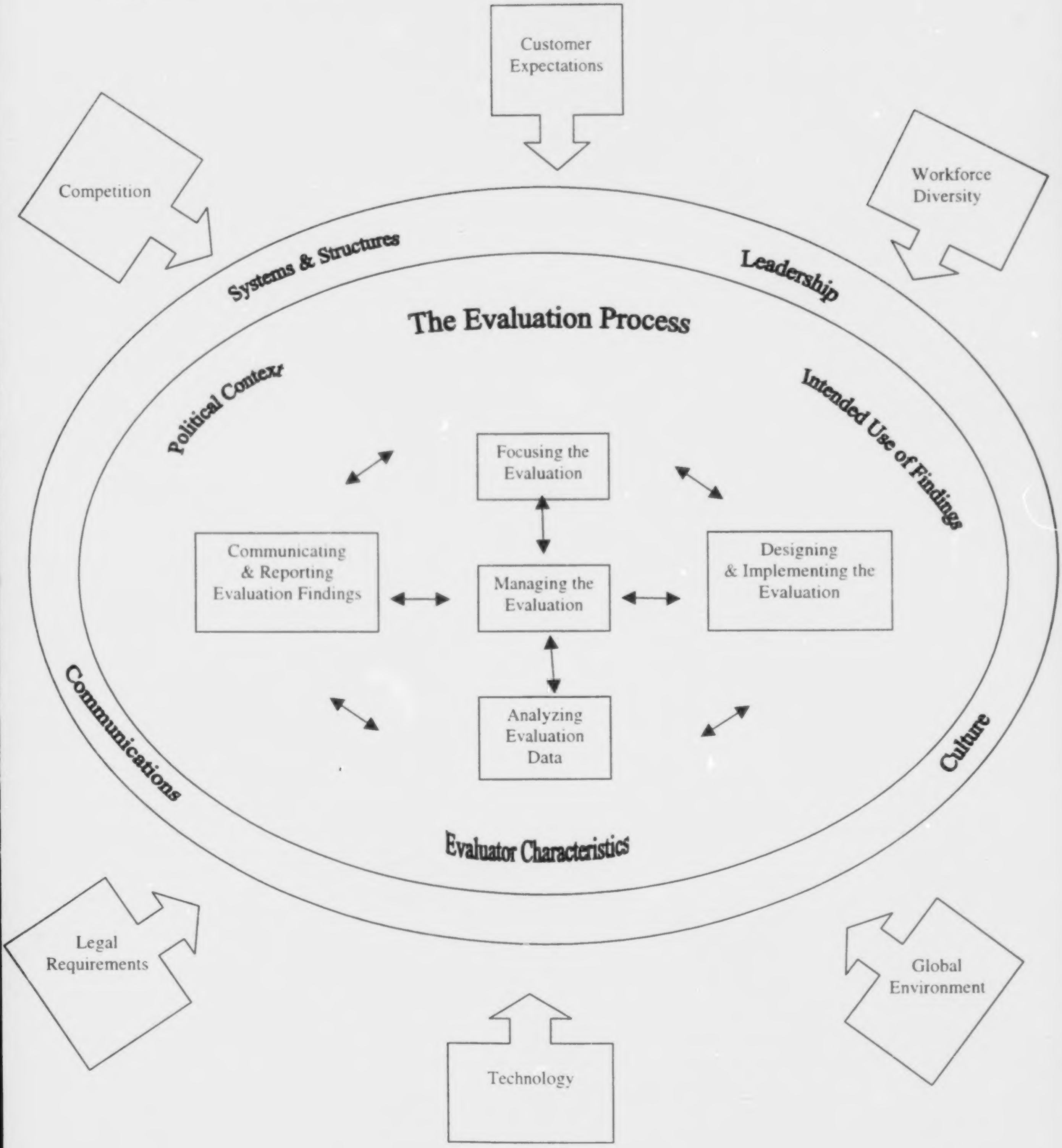
As depicted in Figure 1, the evaluation model's general conception denotes a non-linear understanding of evaluation practice, though the evaluation process itself occurs in a somewhat linear manner. Starting with the center circle, we outline five critical evaluation phases or processes. Every evaluation starts with the *Focusing* phase. This is where primary stakeholders of the program come together to discuss the background and history of the evaluand (that which is being evaluated), to identify other stakeholders who might be interested in using the evaluation results, and key questions the evaluation will address. This process is fundamental to ensuring that the evaluation attends to issues of concern to a variety of individuals and groups. Throughout our teaching, training and consulting experiences, we have found that all too often trainers use the term "evaluation" synonymously with "survey." Without first knowing what questions we wish to answer from an evaluation, it is difficult to know which methods should be used to collect valid data. The second phase of the evaluation process is determining the evaluation's *design, methods of data collection, and means for implementation*. There should be discussions about which methods (e.g., surveys, tests, interviews, observation, document reviews) would be best suited to answering the key evaluation questions. In addition, the team should talk about how to ensure the validity of data, how to obtain a high response rate, the timing of data collection, and how to choose a sample population if the entire population cannot be involved. The next phase in the evaluation involves *analyzing the data*, as well as interpreting and assigning meaning to the data. This process typically involves statistical analysis of quantitative data and/or content analysis of the qualitative data. The fourth phase of the evaluation process is *communicating and reporting* the evaluation findings. Though it appears as a final phase in the process, it should be noted that it is often important to communicate the evaluation's progress and sometimes, preliminary findings, to various stakeholders or audiences during the evaluation. HRD professionals who do evaluation should also seek ways to disseminate the findings via various communication devices such as memos, posters, and newsletters, in addition to the usual report (Torres, Preskill, & Piontek, 1996). The fifth part of the process is making sure to have one or more management plans that describe in detail, the logistics of the evaluation. There may be several different plans including a time-line, a roles and responsibilities plan, a communicating and reporting plan, a budget, and/or a plan of options in case obstacles are encountered during the evaluation's implementation.

What we have just described is standard practice for most evaluators, and by itself, does not constitute the uniqueness of this model. It is the remaining components that have gone unexplained in the HRD evaluation literature. As can be seen in Figure 1, the *Evaluation Process* sits within an internal organizational context that includes three components: 1) *Evaluator Characteristics*, 2) *Political Context*, and 3) *Intended Use of Findings*. We provide these additional components because of their potential affect on the evaluation's commissioning, design, implementation, and reporting of findings. Evaluation does not occur in isolation; it is affected by several different personal and organizational factors. One of these factors is the evaluator's characteristics. These characteristics include the evaluator's:

- credibility
- experience with the program
- previous experience in conducting evaluation
- knowledge of evaluation theory and methods
- position within the organization relative to the program being evaluated
- commitment to evaluation and use of findings
- understanding of the organization's culture and politics
- commitment to ethical behavior - integrity
- group facilitation skills
- verbal and written communication skills
- understanding of program content
- data analysis skills

In order to minimize evaluator bias as much as possible in designing, implementing and reporting the results of the evaluation, we recommend establishing a task force, or workgroup that agrees to

Figure 1.


Customer Expectations
Competition
Workforce Diversity
Systems & Structures
Leadership
The Evaluation Process
Political Context
Intended Use of Findings
Focusing the Evaluation
Communicating & Reporting Evaluation Findings
Managing the Evaluation
Designing & Implementing the Evaluation
Analyzing Evaluation Data
Communications
Culture
Evaluator Characteristics
Legal Requirements
Global Environment
Technology

collaborate on the evaluation. This approach creates a kind of checks and balances throughout the evaluation process. Plus, it increases the team and organization's learning potential by their very involvement in the evaluation. Assessing these evaluator characteristics before the evaluation begins, can not only help build a better evaluation team, but it can help avoid some serious obstacles once the evaluation is underway.

Evaluation is inherently a political act. Therefore, it is important that HRD professionals clearly understand that regardless of the evaluation's depth and scope, it deals with issues of power, position and resources. In 1973, Carol Weiss was one of the first evaluation researchers to publicly recognize the importance of politics and values within the evaluation and policy-making process. She identified three ways in which evaluation and politics are related: 1) The policies and programs with which evaluation deals are creatures of political decisions; 2) Because evaluation is undertaken in order to feed into decision-making, its reports enter the political arena; and 3) Evaluation itself has a political stance. By its very nature it makes implicit political statements about such issues as the problematic nature of some programs and the unchallengeability of others, the legitimacy of program goals and program strategies, the utility of strategies of incremental reform, and even the appropriate role of the social scientist in policy and program formation (1987, p. 47-48). Thus, the proposition, "evaluation is always disruptive of the prevailing political balance," reminds us that even in programs that seem "nonpolitical," there are political implications from the mere act of evaluation, not to mention the findings (Guba & Lincoln, 1981). As a group begins to engage in the evaluation process, they should consider the ways in which the evaluation could be political and identify ways in which the politics can be managed.

The third component is *Intended Use of Findings*. For over 25 years, evaluation researchers have explored the topic of evaluation use or utilization. Michael Patton, who has written most extensively on this topic, suggests that evaluation without an intention to use the findings should not be conducted at all (1997). We concur. We like to think that *use* is to evaluation what *transfer* of learning is to training. In other words, for every evaluation that is conducted, there should be a plan for the intentional use of findings; otherwise, investing the resources in an evaluation may be questionable. Use of findings can take several forms, however. Most common is what is referred to as "instrumental use." With this kind of use, there is a direct application of the evaluation findings. For example, if a particular case study exercise in a training workshop consistently receives low ratings, the trainer may decide to eliminate the case and replace it with a different experiential activity. This represents a direct or instrumental use of the evaluation findings.

The second type of use is called "conceptual" or "knowledge" use. This type of use cannot be seen directly, as the information from the evaluation becomes integrated with what the 'user" already knows or believes about the evaluand. The evaluation information serves to inform the individual, and contributes to a higher level of understanding or cognition about the program being evaluated. The individual might make a decision later on that in part was based on the evaluation findings, but she might be hard pressed to say it was based solely on the evaluation's results.

Finally, evaluation findings might be used in a "symbolic," "political," or "persuasive" way. For example, many programs are required to participate in an accreditation evaluation, which includes a self-evaluation component. Members of the organization might not be particularly interested in the evaluation and thus do it, symbolically. They may not use the findings to improve their programs, but they can show that "they did it." Another common example is when we use the findings of an evaluation to lobby for additional program resources. This political act is a justifiable use of evaluation results. Weiss (1998) suggests that,

> Rather than yearning to free evaluation from the pressures of politics, a more fruitful course would be to undertake and report evaluation with full awareness of the political environment. A study will be more useful and more likely to be used if it addresses the issues that are in contention and produces evidence directly relevant to political disputes (p. 316).

In many evaluations the results may be used in all three ways: 1) instrumentally for improving the program, 2) conceptually to inform others about the program's effects, or 3) symbolically, to increase the credibility of the HRD function. It is important for the evaluation team to discuss these potential uses and to identify anywhere the process or findings might be misused before the evaluation is implemented.

Even if the evaluation process is well defined and articulated, and even if the evaluation team has considered the evaluator's characteristics, the political context, and the intended uses of the evaluation's findings, evaluation still must be implemented within an even larger organizational context. The outer circle (Figure 1) describes the necessary organizational infrastructure for supporting evaluation practice (Preskill & Torres, 1999). Though rarely discussed in other HRD evaluation models, we believe that for evaluation to contribute to learning and decision-making in organizations, there must be at least some presence of these four elements. The first is the organization's *leadership*. The more leaders support a learning environment, the more likely organization members will support systematic and ongoing evaluation. If organizational leaders suggest that they know it all, or that learning from our experiences is unnecessary, then evaluation will be more difficult to implement. On the other hand, if leaders model learning, create a spirit of inquiry, and use data to act, then evaluation practice may be more successful.

The second element, the organization's *culture*, is fundamental to creating learning from evaluation practice. If the culture is one which supports asking questions, open and honest communication, teamwork, risk-taking, valuing mistakes, and employees trust each other, evaluation may be welcomed and successful. However, if organization members are afraid to give their opinions, don't believe managers will act on the results, or the results will be used to punish individuals or groups, then the evaluation's results will be less useful in helping the organization make effective decisions.

The third element, organization *communications* is closely related to the *intended use of evaluation findings*. The more systems and channels an organization has to communicate and report the progress and findings of an evaluation, the more likely the evaluation will have an impact on individuals, teams, and the organization overall. However, if there are few means to share what is learned from the evaluation, or organization members are restricted from sharing their learning, then evaluation will lose an important opportunity for enhancing the organization's performance.

The fourth element is the organization's *systems and structures*. How employees' jobs are designed, how they are rewarded and recognized for their work, and how learning is expected to occur, are all important factors in how often and how well evaluation may be conducted by organization members. The more cross-trained they are, the more they are encouraged to learn from each another, the more their jobs allow for teamwork, and the more employees understand the interrelatedness of their jobs, the more likely evaluation will serve its learning function.

Finally, the model we propose takes into account the fact that organizations, more than ever, are being influenced by a myriad of external forces (Drucker, 1997; Judy & D'Amico, 1997; Marquardt, 1999) (see Figure 1.). These include increasing competition for personnel and other resources, evolving customer or client expectations, an increasingly diverse workforce, new requirements for working in a global environment, technological advances which are literally altering the way we work and communicate, and ever-changing legal rules and regulations. While HRD professionals do not need to conduct a complete scan of these variables when designing and implementing an evaluation, they should at least be aware of where and how the organization is responding to these factors at any point in time. It is entirely possible that an evaluation could be seriously affected by any one of these variables.

The Contribution of the Evaluation Model to HRD Practice and Research

Many writers on management today believe that the future success of organizations will be dependent on their ability to build core competencies within a context of collaboration. Technology, and quick and easy access to information will help create web-like structures of work relationships which will facilitate their working on complex organizational issues (Hargrove, 1998; Helgeson, 1993; Limerick & Cunnington, 1993; Stewart, 1997). We believe evaluation can be a means for a) collectively identifying information needs, b) gathering data on critical questions, and c) providing information that when used, becomes part of the organization's knowledge base for decision-making, learning, and action. As organizations have been forced to respond to an increasingly competitive environment that is volatile and unpredictable, and as they are likely to continue being pressured to do things better, faster, and cheaper, they are looking at evaluation as a means to help them determine how best to proceed. For the HRD practitioner, the proposed model offers a kind of roadmap for undertaking an evaluation. Instead of deciding to gather only participant reactions, the practitioner can use the model to determine the political context and intended uses of findings in order to determine what questions must be answered by the evaluation. By doing so, the practitioner will be following a more comprehensive and systematic evaluation process. Such a process should increase the probability that the evaluation findings are valid and can be used for decision-making.

For the HRD researcher, the proposed model offers new research opportunities. For example, HRD scholars could examine the specific effects of evaluator characteristics, the political context, and the intended use on decisions regarding the evaluation design of a learning and performance initiative. Furthermore, researchers need to determine the effects of these factors on actual use of evaluation findings. Other questions might revolve around the effects of the evaluation process on organizational decision-making. For example, do certain evaluation designs and methods tend to emerge from certain evaluator characteristics, political contexts, or intended uses? What is the impact of certain evaluation processes on organizational decision-making? Do organizations or functions within organizations that routinely evaluate programs and processes yield higher levels of learning and performance than those organizations or functions that do not evaluate?

In the knowledge era, where we now find ourselves, it is critical that organizations learn from their experiences, that they see themselves as part of a larger system, and that they use quality information for making timely decisions. We hope that the proposed evaluation model will provide HRD practitioners and researchers with a tool that can help them collect and use valid information that contributes to individual, group, and organizational growth and success.

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Economic Analysis of Human Resource Development: Update on the Theory and Practice

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A serious problem facing the HRD profession is the perception among executives that workforce competence and expertise are essential while HRD is optional. Studies of HRD practices report that almost no HRD functions are assessed in terms of their overall economic contribution to the organization. This paper reports economic research related to the contribution HRD makes to the success of organizations and proposes new areas of economic research.

Key words: economic analysis, benefit analysis, financial benefit analysis

Does business education provide value for the money? This is one of the pressing questions posed in the recent business book titled Gravy Training (Crainer & Dearlove, 1999). Couple this message with headlines like "Training falls down on the job." (Daily Telegraph, October 27, 1997, p. 31) and the popular perception that HRD costs organizations more than it returns in benefits continues.

Any organization that remains alive will ultimately judge each of its components from a return-on-investment (ROI) framework and they will do it with or without valid data. Not only will the judgement be made; actions will be taken based on the economic assessment (real or perceived economic data). These hard decisions are not restricted to private sector business and industry. Every organization is ultimately an economic entity. Organizations do not have an inherent right to continue to exist. Two examples that quickly come to my are the closing of my childhood church over 20 years ago and a more recent closing of a non-profit ballet performance company.

To face this challenge, four views of HRD have been presented to the HRD profession. They are: (1) a major business process, something an organization must do to succeed, (2) a value-added activity, something that is potentially worth doing, (3) an optional activity, something that is nice to do, and (4) a waste of business resources, something that has costs exceeding the benefits (Swanson, 1995).

The dominant view of HRD is within the last two options above-- HRD as being an optional activity or having costs greater than its benefits. The simple idea that HRD is not a good investment is popular and entrenched. At the same time HRD professionals most often believe that what they do is a good investment. The popular belief within the profession has very little evidence to back it up with only three percent are evaluated for financial impact (Bassi, Benson, & Cheney, 1996).

Problem Statement, Historical Framework, and Research Questions

Top decision-makers in organizations create scenarios and strategies that provide essential and fundamental organizational direction. These decisions are ideally based on estimates of future states and what is required to attain them. While HRD theorists and leaders may think of HRD as essential, strategic, and a sound investment, it is the perspectives that top decision makers have on knowledge, competence, and expertise that fundamentally limits the role of HRD in an organization (Herling & Provo, 2000).

HRD leaders propose strategies, projects, and programs to top management. Unlike other managers, HRD people tend to resist these strategic tasks, especially when they are tied to economic issues. While much claim economic theory to be fundamental to the profession (Ruona & Swanson, 1998), HRD people are not inclined toward the financial side of the organization.

Historical Framework

Economic thinking related to human capacity, human expertise, and human effort and the effects of each is disjointed. History provides a fairly consistent notion that there is much to be gained by being purposeful in managing these domains. Throughout history, the ideological responses to capturing the spoils of human expertise have ranged from communes, to slavery, to meritocracies.

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The importance of increasing one's expertise is confirmed in society's comparisons of educational levels and economic success. Even so, investments in the development of its personnel are still not a clear option for most firms. Organizations can access expertise in ways other than offering development programs. For example, they can hire expertise and/or establish the expectation that employees will manage the development of their own expertise. Neither of these two options requires an organization to make direct financial outlays for HRD.

For the HRD profession, the "Training Within Industry" project (Dooley, 1945) was a watershed. This 1940-45 massive national performance improvement effort clearly and consistently demonstrated the economic impact of HRD and the required conditions for achieving financial benefits. The role of this national effort in shaping the contemporary HRD profession (see Ruona & Swanson, 1998) and for directly connecting the profession to economic results cannot be underestimated. Unfortunately, the informed and best practices in HRD during WWI slowly eroded during the postwar affluence in a manner similar to the quality of USA produced goods.

In the 1970s a renaissance in the profession provided incentive to think more about HRD as an investment. The literature increasingly reported financial analysis methods (FAM) and studies of programs' costs and benefits (Cullen, Sawzin, Sisson, & Swanson, 1976, 1978; Gilbert, 1978; Meissner, 1964; Swanson & Sawzin, 1975). In the 1980s this financial analysis trend continued with a greater focus on costs and the human resource management perspective versus performance improvement (Cascio, 1987; Flamholtz, 1985; Head, 1985; Kearsley, 1982; Spencer, 1986). These company-wide FAMs took an accounting perspective rather than a performance improvement perspective.

To the 1980s, FAM efforts in HRD did not address the decision-making dilemmas faced by organizations at the investment decision stage of their organizational planning. Difficult as it may seem, any organization can conduct an after-the-fact cost-benefit analysis. What was needed was a method for forecasting those costs and benefits, at the point of making investment decisions. The forecasting financial benefits (FFB) of HRD method was designed to fill this gap (Swanson, Lewis, & Boyer, 1982; Swanson & Geroy, 1983; Swanson & Gradous, 1988). The FFB is a practical step-by-step method for making accurate investment decisions based of forecasting (1) the financial value of improved performance projections for a program, (2) the cost of implementing a program, and (3) the return on the program investment (Swanson & Gradous, 1988). The FFB method is best suited to short term HRD interventions purposefully connected to performance deficiencies.

Problem Statement and Research Questions

The problem facing the established FAMs are not easily applied to large-scale change, long-term change and to interventions loosely connected to performance requirements. The following two questions serve as the basic of this inquiry:

1. What are the general findings relevant to the financial analysis of HRD have appeared in the literature?
3. What economic theories and tools reported in the literature should HRD pursue to assess the HRD function and large-scale, organization-wide change efforts?

General Findings Related to HRD Financial Analysis Methods

The basic financial analysis method (FAM) method, based upon several years of research, has proven to be a helpful tool to overcome the difficult and often resisted problem of talking about human resource development in dollar and cents terms (Swanson & Gradous, 1988). The model and method for analyzing actual and forecasted financial benefits are relatively simple and straightforward. They both have three main components: (1) the performance value resulting from the program, (2) the cost of the program, and (3) the benefit resulting from the program. The basic financial analysis model is:

$$\begin{array}{r} \textit{Performance Value} \\ \underline{\textit{- Cost}} \\ \textit{Benefit} \end{array}$$

The FAM method is an expansion of the three components into three separate worksheets. Readers wishing to receive detailed instruction on these should obtain the author's full text (Swanson & Gradous, 1988). For a broad overview of FAMs in context of HRD, see Mosier (1990). In addition, the extensive bibliography serves to capture important literature related to the economic analysis of HRD beyond just those studies cited directly in this paper.

Early HRD Financial Analysis Classics

There is a substantial base of HRD economic research. Unfortunately, it spread throughout the refereed, non-refereed, HRD, and non-HRD literature and generally is not in the hands of HRD decision-makers. Five early classics provide excellent examples. The research results from these varied studies were quite consistent. They demonstrated that HRD imbedded in a purposeful performance improvement framework yielded very high returns on investments, an ROI of 8:1 or more in a year or less (see Swanson, 1998).

From Financial Analysis of Methods (FAM) to Forecasting Financial Benefits (FFB)

There are a substantial number of studies in the realm of *forecasting* the financial benefits of HRD. This FFB literature is also dispersed in the HRD literature. These studies in this domain clearly demonstrate that HRD can be a very sound financial investment (see Swanson, 1998). Research further provides evidence that HRD interventions focused on appropriate dependent performance variables and systematically executed will financially forecast and return 8:1 or more. In contrast, there is no evidence that unfocused and unsystematic HRD interventions yield positive returns, let alone returns that exceed the costs.

Recent Financial Analysis Research in HRD

There is a substantial array of new HRD related economic research studies. Each of these studies provides a challenge and opportunity in the financial analysis of HRD benefits. The most interesting are the Critical Outcome Technique (Mattson, 2000) and the efforts at industry-wide impact (Lyau & Pucel, 1995).

Economic Assessment of the HRD Function and Organization-wide Efforts

Companies tend to use a limited number of economic analysis techniques. They include: payback time, average rate of return, present value (or present worth), and internal rate of return (Moore & Reichart, 1983).

Payback time is the time period in which the amount invested is recovered by financial returns. This technique typically avoids long-range issues and also doesn't capture any long-range benefits. *Average rate of return* allows for a comparison of alternatives as to their relative return per dollar invested. Alternatives can be ranked or compared to a standard. *Present value* recognizes that money has value over time and could be making money in other investments. Thus, cash flows are discounted to the present using a standard interest rate. *Internal rate of return* is a method that determines the interest rate needed to make the present value of the cash investment. It represents the rate of interest it would take if all efforts were paid from borrowed funds.

The economic techniques in the previous discussion force the decision-maker-- and HRD decision makers in particular-- to realize that money to make an organization function is not sitting idly in a safe. If there is money available, there are alternative means of increasing its worth. If it is not available, and must be obtained through loans or from selling shares to stockholders, the bank and the shareholders expect a return for allowing the use of their money.

Three economic assessment strategies are highlighted here to explore the challenge of getting beyond the perspective of individual program assessment. They each deserve attention and application in HRD. They are:

- Measuring Intellectual Capital
- Measuring Human Capital
- Strategic Training Investment Decision Model

Measuring Intellectual Capital (Edvinsson & Malone, 1997)

Premise: In a knowledge-based company, the accounting system doesn't capture anything important. Value lies in assets and when the assets are intangible, accounting has great difficulty.
Method: A measurement system for company-wide intellectual capital (IC); 31 possible IC metrics (e.g., information technology investment in dollars, rate of repeat customers in percentage) that can be customized, pursed, and tracked in terms of gains in the metrics and the overall economic performance of the company.

Measuring Human Capital (Provo, 2000)

> *Premise:* Like other assets, there is a return on human assets. Human capital is a source of strategic advantage and requires investment. Build on the value chain, searches for constraints, and uses data models even if the data are imperfect.
> *Method:* A "return on people approach" (Boudreau & Ramstad, 1997). The formula is: Effectiveness (increase in capabilities) x Impact (value of capabilities) = Benefit (value created).

Strategic Training Investment Decision Model (Krone, 2000).

> Premise: There is strategic economic risk associated with investing in a training initiative. There is (1) general training that raises the productivity the same for the firm providing the training as in other firms and (2) specific training provided by a firm has value to that firm and no utility to competitive firms (Becker, 1993).
> Method: The training investment decision is based on the expected return on specific training, plus the expected return from general training, minus the performance improvement value of the training to the competing organizations

Conclusion

Economics has been purported to be one of the foundational theories of the HRD discipline. Yet, the HRD profession is woefully behind in reporting its economic contribution. This paper dichotomizes economic analysis into: (1) the individual program level and (2) the larger function or multi-dimensional organization-wide intervention level. The financial analysis methods available to the HRD profession are more than adequate to do the economic analysis of individual programs. In contrast, the methods and reported research economic analysis of the total HRD function or multi-dimensional organization-wide interventions is inadequate. Economic research into the underlying economic theory and application to HRD is needed to fill this void.

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Evaluating HRD Research Using a Feminist Research Framework

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Over 400 AHRD Proceedings papers from 1997-1999 were analyzed according to a feminist research framework to understand how HRD creates knowledge through research. Although knowledge is being produced through both traditional and non-traditional methodologies, few studies recognize gender as a category of analysis. Nearly absent from the literature are studies concerned with: women/diverse people's experience; asymmetrical power arrangements; problems of racism and sexism; or advocacy of social justice and change. Research implications research are discussed.

Keywords: Research, Feminism, Document Analysis

Human Resource Development is an emerging discipline that is in the process of creating and validating knowledge. Little has been written about HRD research itself (Hixon and McClernon, 1999; Jacobs, 1990; Sleezer and Sleezer, 1997, 1998). Existing studies of HRD research have investigated journals publishing HRD research (Hixon and McClernon, 1999; Sleezer and Sleezer, 1997, 1998), and analyzed study context and methods (Hixon and McClernon, 1999). Arnold (1996) examined the 1994 and 1995 proceedings of AHRD according to the type of research and tools used to discuss findings, and van Hooff and Mulder (1997) described the contents and characteristics of research appearing in the 1996 AHRD proceedings. van Hooff and Mulder found that most researchers conduct studies of individual development and on the development of HRD as a field. Key research issues include: integrity, globalization, teams, employee development, learning on-the-job, new technologies, transfer, evaluation, organizational change, training effectiveness, partnership research, and roles in HRD. HRD has an impressive and diverse body of research. As the field emerges it is important to not only continue existing research, but also critically assess what is and is not being studied.

HRD as a discipline, has not exceedingly concerned itself with issues of diversity, equality, power, discrimination, sexism, racism, or other similar issues in organizations. Yet, these challenges pervade in both the workplace and society. Governmental policies, business practices, and research agendas lag behind the pace of workplace diversification. Fernandez observes, "corporate America as a whole, has failed to effectively address the challenges posed by diversity, particularly with regard to racism and sexism" (1999, p. 3). Meyerson and Fletcher (2000) suggest that discrimination in organizations is so deeply embedded culturally that it is practically indiscernible. Whether you consider race or gender, the figures are grim. Beck reports that 99 percent of all American women will work for pay at some point in their lives (1998). Although women's workforce participation has steadily increased and shows no sign of diminishing in the new millennium, women trail men in pay, promotion, benefits, and other economic rewards (Knoke & Ishio, 1998). Despite the progress over the last fifty years, about half of the world's workers are in sex-stereotyped occupations, and women work in a narrower range of occupations than do men. Rowney and Cahoon (1990) suggest that women find it easier to obtain leadership positions at lower levels in the hierarchy. According to their figures women hold only 23 percent of managerial positions in Canada, which is similar to the United States (24 percent) and the United Kingdom (19 percent). They found, in a sample of 423 organizations, that 30 percent of first line supervisors were female, whereas only 17 percent of middle managers and 8 percent of executives were women (1990). Despite more equal opportunity, women are still segregated into typically "female" careers, and the wage gap persists. Women earn 76 cents for every dollar men earn (Bureau of Labor Statistics, 1998), with the average managerial level differential at 74 cents. The data worsen based on race. African-American women earn 58 cents; Hispanic women earn 48 cents, Asian/other women earn 67 cents (Catalyst, 1997).

Women at the top levels are still a rarity comprising only 10 percent of senior managers in *Fortune 500* companies. Fewer than 4 percent of women hold positions of CEO, president, executive vice president and COO, and less than 3 percent of top corporate earners are women (Meyerson and Fletcher, 2000). Carly Fiorina became

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the first woman CEO of a *Fortune 100* company when she was named CEO of Hewlett-Packard during 1999. She is one of only three women CEO's in the *Fortune 500*. Dobosz notes, "Fiornia, briefly forgetting her math, cavalierly told the press that her appointment proved that there was no glass ceiling" (2000, p. 21). The glass ceiling is alive and well although Meyerson and Fletcher suggest it has gone "underground." They explain, "Today discrimination against women lingers in a plethora of work practices and cultural norms that only appear unbiased. They are common and mundane—and woven into the fabric of an organization's status quo—which is why most people don't notice them, let alone question them. But they create a subtle pattern of disadvantage, which blocks all but a few women from career advancement" (200, p. 128). Hultin and Szulkin studied Swedish workers to investigate gender wage inequality, specifically whether earnings were affected by the gender composition of the establishments' managerial and supervisory staff. They found that "gender-differentiated access to organizational power structures is essential in explaining women's relatively low wages" (1999, p. 453). They emphasize that gender composition in hierarchical power structures should be considered an important part of research to increase our understanding of gender wage inequity. They conclude that, "Power relations in work organizations are of crucial importance for understanding how gender inequalities in financial rewards are generated and sustained in the labor market" (1990, p. 465).

Workplace HRD is not exempt from this type of systemic discrimination. Knoke and Ishio (1998) conducted longitudinal data analysis on a cohort of young workers to document that women's participation in company training programs was at a significantly lower rate than men's. Their study was done to evaluate whether reports of a demise of the gender gap in company training based on incident levels observed in cross sectional surveys were accurate. Knoke and Ishio indicated that, "Our principle conclusion is that the gender gap in company job training remains far more robust, tenacious, and resistant to explanation that previous researchers had indicated. This discovery admonishes both firms and social researchers to pay more attention to the ways that employees' genders interact with private-sector policies and practices" (1998, p. 153). This study was undertaken heeding pleas for more gender sensitive research (Hultin & Szulkin, 1999; Knoke & Isho, 1998) and recognizing Meyerson and Fletcher's (2000) argument that discrimination is embedded so deeply that we do not often see it.

Problem Statement

HRD is an emerging discipline. Now is the time to question the theoretical frameworks and practices defining the field before they become embedded and simply serve to reinforce the status quo. Today's HRD research and practice pays significant attention to the US corporate context, skews loyalties toward management, and lauds performance improvement above other results. HRD researchers must explore the assumptions underlying their research, consider the beneficiaries of research, reflect on areas yet unexplored, and question the value of HRD research according to its impact on theory, practice, organizations, communities, and employees.

Research questions in the social sciences have traditionally been conceptualized without consideration of women (Fine, 1985; Lykes & Stewart, 1986; Unger, 1983) and HRD is no exception. A quick reading of HRD research reveals an agenda driven by management interests focused primarily on learning and performance. Leimbach and Baldwin (1997) identify the characteristics of effective HRD research as being customer driven, linked to value creation, short in duration, and rigorous. These characteristics are important in HRD research, however, they overlook issues related to women and other diverse individuals, power relationships, social context, or social and political change. Employees are not even mentioned in the characteristics.

The purpose of this inquiry is to understand how the HRD field is creating knowledge through research. We are intrigued by what is valued knowledge in HRD and how the research trends over time shape the emerging field of HRD. The questions guiding this research are, "To what degree is HRD research using feminist inquiry? What are some under-addressed dimensions for the emerging field of HRD?"

Theoretical Framework

This study is grounded in a feminist research framework. Describing the many types of feminism is beyond the scope of this paper. A feminist--at the most simplistic level--is a person who seeks economic, social and political equality between the sexes. Feminists participate in and/or support organized activity to advance women's rights and interests. Acker, Barry, and Esseveld (1983) define feminists as engaged in: acknowledging the exploitation, devaluation and often oppression of women; making a commitment to changing the condition of women; and adopting a critical perspective toward dominant intellectual traditions that have ignored and /or justified women's oppression. Pritchard (1994) suggests that "Feminist critique starts with 'women' or 'women's issues' but goes beyond to the impact of gender relations and gendered conditions of human development in all spheres of thought and action" (p. 42). Conduit and Hutchinson (1997) summarize five strategies viewed by feminist researchers as needed to create change and measure progress. These include: (1) providing women access and encouragement to enter the world of work, politics, and knowledge production; (2) reclaiming the works of previously absented women (or absent treatments of women) to what is considered the fundamental canon of knowledge in a given discipline; (3) adding women into the pot of "the human subject" in all types of research where they have been previously represented only through their absence; (4) turning feminist eyes, of diverse types, to a reexamination of the fundamental theories, mechanisms of analysis, and primary values that have given shape to our epistemological techniques and our ontological assumptions; and (5) ascertaining how adding women and feminism to the mix at so many levels has changed the kinds of questions asked, the types of policies attended to, and the categories of research done.

Feminist critique examines power in social and political institutions and the values and communication patterns that manifest themselves in both abstract and concrete patterns. Feminist critique has revolutionized workplace analysis and the ways knowledge is constructed (Pritchard, 1994). See Bierema (1998a; 1998b) for further explanation about feminist research in HRD.

Methodology

We conducted document analysis of AHRD conference proceedings from 1997-1999 using a feminist research framework. We selected a feminist framework because we felt it provided the most critical lens for assessing HRD research. Feminist research is concerned with eliminating all forms of oppression, thus it was suitable for considering research on diverse populations. Worell (1996) credits feminist psychologists with introducing a dialogue that challenged prevailing structures of knowledge creation. Feminist research is grounded in assumptions that, like most other social institutions, the process of knowledge creation and dissemination has historically been the province of white men. Women's experience and knowledge has been traditionally excluded or overlooked in social science research. During the last two decades, feminist social scientists have critiqued the research process and provided definitions of feminist research.

Bierema (1998a; 1998b) conducted an exhaustive review of the literature on feminist research and a preliminary analysis of 1997 AHRD proceedings. Based on the literature review, Worell and Etaugh's 1994 framework defining feminist inquiry was selected as the model to evaluate AHRD research. Worell and Etaugh (1994), synthesized feminist theory and research in psychology and other disciplines to establish "Themes and Sample Variations in Feminist Research." Worell adapted the list and suggests that feminist research:

1. Challenges traditional scientific inquiry.
2. Focuses on the experiences and lives of women.
3. Considers asymmetrical power arrangements.
4. Recognizes gender as an essential category of analysis.
5. Attends to language and the power to "name."
6. Promotes social activism and societal change (1996, p. 476).

We carefully studied this framework and modified it for the present study to make it appropriate for assessing HRD research. Refer to Appendix 1 for a description of the six categories.

We selected AHRD proceedings for analysis rather than the *HRDQ*, as we believe the proceedings provide a broader view of *all* HRD research, not only research that is published in journals. We intend to analyze the first ten volumes of *HRDQ* and complete analysis of AHRD proceedings prior to 1997 in the future.

Data Analysis

Four hundred and eight proceedings papers were critically reviewed for this study. After reading the articles, research methodology was recorded and each paper was assessed to evaluate whether or not it met any of the six categories. All papers were considered. Some papers such as forum debates or articles on how to publish in journals were not considered in the analysis, and were coded "other." After eliminating these papers, 396 were analyzed according to our framework. Data were recorded on a spreadsheet. Papers qualified for each of the six categories if they met one or more of the points specified by the Feminist Framework for Evaluating HRD Research (Appendix 1).

Findings

A wide variety of research methodology is applied in HRD. Studies were classified according to traditional (experimental, quantitative), non-traditional (multiple methods, qualitative), conceptual/theoretical, review of the literature, or other (forums, journals). Table 1 shows the breakdown by type of methodology applied. There is a balance of both quantitative and qualitative research in HRD. There were many conceptual/theoretical papers as well. This corresponds with Hardy's (1999) meta-study of HRD research. He suggests that emerging fields engage in a considerable amount of theory generation and qualitative research to form a theoretical foundation, and gradually shift toward quantitative studies to validate theory.

Table 1
AHRD Conference Proceedings Methodology

	1997		1998		1999		1997- 1999	
Methodology	#	%	#	%	#	%	#	%
Traditional/Experimental	40	32.0	43	34.68	61	38.36	144	35.29
Non-traditional	45	36.0	40	32.26	68	42.77	153	37.50
Conceptual/Theoretical	25	20.0	24	19.35	26	16.35	75	18.38
Review of literature	12	9.6	10	8.06	2	1.26	24	5.89
Other	3	2.4	7	5.65	2	1.26	12	2.94
Total	125	100	124	100	159	100	408	100

Table 2
1997 AHRD Conference Proceedings according to Feminist Framework for Evaluating HRD Research

	1997 n=122		1998 n=117		1999 n=157		1997- 1999 n=396	
Feminist Framework	#	%	#	%	#	%	#	%
1. Challenges traditional scientific inquiry.	50	40.98	45	38.46	71	45.22	166	41.92
2. Focuses on women's experiences and lives	6	4.92	3	2.56	11	7.01	20	5.05
3. Considers asymmetrical power arrangements.	7	5.74	6	5.13	7	4.46	20	5.05
4. Recognizes gender/diversity as category of analysis.	11	9.02	11	9.40	20	12.74	42	10.61
5. Attends to language and the power to name.	7	5.74	6	5.13	7	4.46	20	5.05
6. Advocates social activism and change.	12	9.84	7	5.98	9	5.73	28	7.07

Table 2 shows the papers according the Feminist Framework for Evaluating HRD Research. It examines how many papers met the six categories. Each of the categories was assessed against the total manuscripts by year and cumulatively for 1997-1999. Challenging traditional scientific inquiry is the most frequent category with nearly 38 percent of the papers falling into this category over three years. The next most frequent category is recognizing gender as a category of analysis. Studies met this criterion over 10 percent of the time over three years. Far less frequent were the categories: 2) focuses on the experiences of women/diverse groups; 3) considers asymmetrical power arrangements; 5) attends to language and the power to name; and 6) advocates social activism and change. These occurred in 5-7 percent of the papers from 1997-1999.

Table 3 summarizes the number of studies according to the number of categories that were present within a single study. Unfortunately there were few that met more than one category (usually the research category). Over half of the articles failed to meet the categories whatsoever.

Table 3

Number of Categories met 1997-1999

	1997 n=122		1998 n=117		1999 n=157		1997- 1999 n=396	
Methodology	#	%	#	%	#	%	#	%
Meets all 6 categories	0	0	1	.855	1	.64	2	.51
Meets 5 categories	3	2.46	0	0	3	1.91	6	1.52
Meets 4 categories	2	1.64	3	2.56	2	1.27	7	1.77
Meets 3 categories	5	4.10	3	2.56	6	3.82	14	3.54
Meets 2 categories	7	5.73	4	3.42	8	5.10	19	4.79
Meets 1 category	41	33.61	43	36.80	64	40.76	148	37.37
Meets none of the categories	64	52.46	63	53.85	73	46.50	200	50.50
Total	122	100	117	100	157	100	396	100

Discussion

This section revisits the Feminist Framework for Evaluating HRD Research and assesses the findings against it. It also makes some recommendations for future HRD research. Although these criteria focus on research models that challenge scientific inquiry, experimental designs are considered feminist research if they meet the other criteria set forth in Appendix 1, and they were considered for this analysis. DeVault (1996) implores researchers to avoid favoring one philosophical research stance over the other and suggests that "feminists have made major contributions by finding concepts and practices that resist 'dualisms' and they urge resistance to the qualitative-quantitative division" (p. 31). Quoting Cannon, Higginbotham, and Laung, she points out that small scale projects may be more likely than quantitative studies to reproduce race and class biases of the discipline by including participants who are readily accessible to the researchers. She also advocates that "quantitative feminist work involves correcting gender and other cultural biases in standard procedure" (p. 31). Quantitative methods are customarily used in HRD research and researchers would improve knowledge about race and gender by heeding DeVault's advice. Qualitative research is also widely applied in HRD research, however, very few authors acknowledge their role as the researcher or are forthcoming about their biases. We believe all types of research have value and encourage research that strives to eliminate bias, promote equity, reveal corrupt or harmful practices, and improve the standing of all employees.

Five percent of the papers over three years dealt with women's issues and even fewer addressed diversity. Articles on individuals possessing a double minority status, such as Black women, were almost non existent. We found no articles addressing how women have contributed to HRD history or that examine the multiple representations of women in society (they are not all white, middle class). We conclude that the questions relevant to working women and diverse groups, such as harassment, discrimination or job segregation, are not being adequately addressed in HRD research. We agree that HRD research must aggressively pursue these topics in a diversifying, globalizing workplace. Understanding how power is wielded in HRD is not a priority according to our analysis finding that only 5 percent of the papers addressed asymmetrical power arrangements. We found this particularly stunning considering the impact that group and power dynamics has on all organizational activities. We are encouraged that over 10 percent of the papers from 1997-1999 recognized gender as a category of analysis. What was surprising, however, was that many more studies report women in the sample, but fail to include analysis based on gender. All participants are lumped into the same category and measured. HRD research must move beyond counting women and diverse groups in the sample to analyzing the data according to these categories.

Although HRD discusses "undiscussibles" in the context of the learning organization, the field has not progressed to addressing undiscussibles related to gender and diversity in research. Five percent of the studies analyzed addressed language and naming. Perhaps we are caught in the fray of political correctness where the overt discussion of the dynamics and impact of racism and sexism cannot be stomached. This silence only contributes to a discourse that marginalizes women and diverse beings in organizational context. HRD needs to delve into the "isms" that are not readily spoken about. HRD needs to address workplace discourse and how it silences, teaches, and oppresses humans.

Although HRD is a field committed to organizational change, there is little advocacy of change beyond the walls of the corporation. Our findings are telling in that only 7 percent of the papers analyzed advocated social activism and change. These findings indicate that HRD lacks a social conscience where research is concerned. We realize that the space limitations of the proceedings papers may have inhibited thorough discussion of social issues, but we were startled at the established pattern of overlooking it in study conceptualization, analysis, and discussion.

Limitations

We acknowledge that this analysis is imperfect. This study was not a critique of the theories and practices of HRD, but rather an analysis of HRD research. We recognize that research cannot be free from culture, history or experience. We are committed to diversity and equity in both the workplace and HRD field. Both of us are white, able-bodied, heterosexual women. One of us is European and the other North American. Through our work in many different organizations and industries, we have different experiences with gender-related issues. We have trained in both HRD and adult education. The analysis of the studies was an inductive, subjective process that was influenced by our experience. To ensure consistency we had multiple discussions about how studies would qualify for each category and discussed studies that were questionable regarding their fit with the framework. We also talked at length about what would exclude a study. We shared long-winded dialogue about what should be considered advocating social change and about how much we could infer in the analysis. We are aware that organizational development and change has the potential to create workplace equity, however, we took a conservative approach to attributing the advocacy of social justice and change as a criteria. We considered only articles that made a strong statement advocating change in the organization that was committed to addressing issues of diversity or inequity. We also assessed articles that had the potential to have a social impact. Above all, we decided that social justice and change could not be inferred in our analysis, but rather had to be overtly stated by the author(s). Our work is not finished. We have yet to conduct a cappa statistic to validate our interrater reliability and have future plans to do this. We also intend to continue analyzing HRD research according to this framework. Finally, our bias is that the HRD field would benefit from research that is more critical and inclusive methodologically, and should strive to create knowledge that promotes social change and workplace equity.

Implications

This analysis of over 400 AHRD papers, representing the most comprehensive, current HRD research to date, discloses what HRD is not focusing on: issues of equity and access in the workplace. Although we are encouraged that HRD has some highly dedicated researchers who are creating knowledge that addresses the issues raised in the feminist research framework, we are also disheartened that the field is not doing more toward creating a diverse, empowered workplace. Other than promoting alternative research designs, and sometimes using women (or diversity) as a unit of analysis, HRD focuses little on issues of social justice in the workplace or larger social context. Women's experience is ignored, as are asymmetrical power arrangements. Gender is not used as a category of analysis—even when data are collected by gender. Organizational "undiscussables" such as sexism, racism, patriarchy, or violence receive little attention in the literature, yet have considerable impact on organizational dynamics. Finally, HRD research has only weakly advocated change. These findings are cause for alarm. Is HRD research reproducing existing power relationships in organizations? Is HRD research in the service of corporate executives and shareholders? What are responsible HRD researchers to do? We suggest a modest starting point of reviewing the Feminist Framework for Evaluating HRD Research and assessing how planned, ongoing, and completed studies address the issues it highlights.

Although there is a dearth of feminist research in HRD, this trend is not unique to HRD. Conduit and Hutchinson (1997) examined eight major public administration and policy journals to assess how many women were publishing, their patterns of publication, and content of the research. They found that women are historically underrepresented in most, but more recently have been publishing at rates commensurate with their representation in the academy. They found a surprisingly small number of articles by women and men scholars that addressed traditional women's policy concerns or applied a feminist perspective to the research. They conclude that public administration has yet to be significantly influenced by the research and theoretical contributions of the women's movement found in the greater academic community. We concur with Condit and Hutchinson's (1997) conclusion, that "when it comes to the question of the emperor's new clothes, the emperor still seems quite bare" (p. 194).

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Appendix 1

*Feminist Framework for Evaluating HRD Research**

1. Challenges traditional scientific inquiry ◆ Rejects the assumption of truly objective science free from culture, history and experience of the observer. ◆ Restructures the polarity of objective-subjective. "Subjects" should not become objects to be manipulated by the researcher but collaborators in the process. ◆ Identifies and corrects multiple elements of sexism and bias in scientific research procedures. ◆ Affirms that raw data never speak for themselves and that all data require categorization and interpretation. ◆ Emphasizes the researcher as an individual who interacts with participants in meaningful ways that enrich both the observer and observed. ◆ Produces a more inclusive science that reflects alternative realities; including multiple perspectives by both researcher and participants; expanding the diversity of all person's involved; recognizing that reality is created, in part by the scientific process. ◆ Extends the populations studied beyond White middle class, college student samples; studying populations that are relevant to the questions being asked. ◆ Values a range of research methods as legitimate; asserting that qualitative, quantitative, ethnographic, and other methods of gathering data may be useful for different purposes and may reveal unique information.	**2. Focuses on the experiences of women/diverse groups.** ◆ Challenges the category of "women" by exploring diversity ◆ Affirms women's strengths, resilience, competence ◆ Discovers women's contributions to HRD research/history ◆ Values women as a legitimate target of study. ◆ Studies women apart from the standard of male as norm. ◆ Questions the category of woman as representative of all women. Recognizes/explores sources of variation, e.g., ethnic and racial identities, socioeconomic status, sexual orientation, disability, age, parenthood, employment status. ◆ Encourages research questions grounded in personal experiences of women researchers. ◆ Encourages research questions relevant to women's lives: sexual harassment, reproductive processes, employment segregation, discrimination, work/life balance, etc. ◆ Rejects sex difference research as basic to our understanding of women, or of men; recognizes differences among women, and among men, are greater than those between them. ◆ Constructs methods of research targeting issues of importance to women's lives such as hostility to women, traditional gender role beliefs—methods that may illuminate other observer relationships and bias against women. ◆ Studies women in the context of their lives and natural milieu; avoids "context-stripping" through laboratory approaches that reduce complexity and individuality. ◆ Attends to women's strengths and capabilities as well as their problems; researches women's competency and resilience. ◆ Views observed gender differences in the context of power dynamics and women's expected socialized role behaviors rather than as differences embedded in biology.
3. Considers asymmetrical power relationships ◆ Seeks empowerment of all girls and women. ◆ Recognizes women's subordinate status in society as based on unequal power distribution instead of on deficiencies; explores power's influence on the quality of women's lives. ◆ Considers differences among women as mediated by power differentials related to opportunities available based on color, economic sufficiency, age, sexual orientation, etc. ◆ Attends to privilege and privation as sources of questions. ◆ Examines women's health concerns within the context of power arrangements: i.e., maternity leave issues. ◆ Studies interpersonal relationship within the context of patriarchal power arrangements. ◆ Explores the basis of stereotyped female characteristics, such as sociability, nurturance, or passivity in the context of unequal power relations; pointing out that what appears natural may be framed by the politics of power. ◆ Shifts attributions of responsibility from victim to perpetrator. ◆ Seeks strategies leading to women's empowerment.	**4. Recognizes gender (and/or diversity) as an essential category of analysis** ◆ Points out the multiple conceptions of gender and diversity; challenges the use of gender only as an independent variable that explains observed behavior. ◆ Explores the functions of gender as a stimulus variable that frames expectations, evaluations, and response patterns. ◆ Recognizes gender as a social construction based on power arrangements; views observations attributed to gender in the context of power asymmetries. ◆ Emphasizes the situational context of gender and gendering as an active process that structures social interactions.
5. Attends to language and the power to "name" ◆ Creates public awareness of hidden phenomena by identifying and naming them, as in sexual harassment, initiates research on hidden phenomena based on the process of naming. ◆ Restructures language to be inclusive of women; rejects the generic masculine; promotes a gender free language system. ◆ Renames and restructures research topics ◆ Reduces polarity between private and public in women's lives, such as renaming women's work, concepts of family, and the appropriate placement of these within private and public domains. ◆ Recognizes that language frames thought and vice versa; attention to syntax as power-driven, such as reversing the obligatory ordering of male/female, boy/girl, men/women.	**6. Promotes social activism and social change** ◆ Reconceptualizes theories, methods, and goals to encompass possibilities for social change, toward reductions in power asymmetries and promotion of gender justice. ◆ Creates a science that will benefit rather than oppress women, and that will correct as well as document the prevalence of inequity, illness, violence, etc. ◆ Remains cognizant of how research results may be used, and promotes responsible applications of research findings. ◆ Directs personal involvement and action to initiation or support changes in policies, practices, and institutional structures that will benefit women and correct injustices.

*Adapted from Worell and Etaugh (1994) and Worell (1996)

Meeting the Informal Learning Challenges of the Free Agent Learner: Drawing Insights from Research-Based Lessons Learned

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The concept of the free agent learner has recently emerged as a factor important to attracting, developing, and keeping knowledge workers. This concept has roots in self-directed and informal learning theory. We draw on studies of such learning conducted over the last decade to discuss findings and implications relevant for the free agent learner. Discussion focuses on informal learning strategies and on relevant contextual, organizational, and environmental factors.

Keywords: Free Agent Learner, Informal Learning, Self-Directed Learning

In this innovative session we draw on a body of research on informal learning in the workplace that has been carried out over the last decade and that is featured, in part, in Marsick and Volpe (1999). The purpose of this session will be to identify lessons learned from this research for today's free agent learners, for those who work with this population, and for the organizations in which they work. Discussants focus on the way in which the lessons that they learned from research on informal learning can help to avoid pitfalls, as well as raise new dilemmas and issues for further research and practice.

Literature on the free agent learner frames this paper and our collective thinking for this session. We also describe a conceptual framework — informal learning from experience — that forms the basis for the research discussed in this paper. We then turn to an overview of lessons learned in the last decade about informal learning and a discussion of the role of the environment on self -directed and informal learning. We draw on the work of Kurt Lewin (1935) who hypothesized that behavior is a function of the interactions between a person and his or her environment. Lewin's work lays the groundwork for understanding the reactions of employees to changes in the psychological contract at work with respect to their own learning and to the role that the environment plays in their learning. Session leaders then highlight key lessons learned from their studies and relate these key lessons to research and practice around the free agent learner. The six studies have the following foci:

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1) Critically reflective learning during a divestiture
2) Learning to become team members in a nonprofit setting
3) Learning in paramedic partnerships
4) Meaning making among mangers of a small publishing business in transition
5) Learning how to manage in new European markets
6) Informal learning among service professionals.

Each contributor to this paper poses questions that will form the basis for dialogue groups. In the dialogue groups, participants will be asked to identify experience that they have had with research and practice around getting a better "fix" on the way in which free agent learners engage in informal learning. Each group will identify at least two group insights from this discussion around additional lessons learned, significant constraints and facilitators to such learning, dilemmas, and challenges in conducting research on this topic. These insights will be debriefed and further discussed in a closing plenary session. The conveners will help the group to identify themes that emerge, as well as lessons around the design and conduct of future research on this topic.

Free Agent Learners

Attention to the "free agent learner" has been increasing in the field of Human Resource Development. Caudron (1999) calls attention to these "independent and highly motivated adults who are taking responsibility for their own ongoing learning and development, as opposed to relying on employers to provide it for them. They're people who understand the need for lifelong learning and are doing something about it" (p. 27). Cauldron draws on statistics from the 1995 National Household Education Survey that indicate that "76 million adults age 16 and older participated in one or more adult education activities during the preceding year" (p. 28). Caudron goes on to say that this number is a 25% increase from four years earlier, and involves 40% of the adult population; that many of these learners already have college degrees and earn good salaries; and that over 50% are women. We note that the profile of these adult learners is very similar to the profile of adult learners in prior surveys on participation in adult education: "white, middle class, employed, younger, and better educated than the nonparticipant. Further, employment-related reasons account for the majority of participant interest in continuing education"(Merriam and Caffarella, 1999, p. 71).

Free agent learners are, in essence, what the field has been calling "self-directed learners." They are proactive, and independently pursue their goals whether or not the environment is supportive to their efforts. Candy (1991) points out that self-directed learners are autonomous in their goals and/or their learning strategies. We know a good deal about self-directed learners from the literature (reviewed, for example, in Candy, 1991 and updated in Merriam and Caffarella, 1999), although there are gaps in the research that still need attention. One of those gaps is the way in which self-directed learners use informal learning strategies to augment their pursuit of more formally structured continuing education and training efforts. Marsick and Volpe (1999) describe informal learning as: 1) integrated work and daily routines, 2) triggered by an internal or external jolt, 3) not highly conscious, 4) haphazard and influenced by chance, 5) inductively occurring through action and reflection, and 6) linked to the learning of others. Informal learning may or may not be consciously used by free agent learners in pursuing their goals.

Another gap speaks to the impact of the environment on self-directed learning. Brockett and Hiemstra (1991) suggest a three-part definition for self-directed learning that examines the following: 1) The individual process of planning, implementing, and evaluating learning; 2) the characteristics of the learner; and 3) the organizational factors that facilitate and impede learning. Cauldron (1999) points out that the environment of many organizations today is not really ready for the free agent learner. After years of calling for employees to become more self-directed and proactive in their learning, companies are not always pleasantly surprised when people actively pursue knowledge and skills. Cauldron notes, "For lifelong learning to become a reality, companies have to be willing to accept the new ideas such employees are bringing to work" (p. 30). Cauldron reports two observations to the contrary by Charolotte Roberts, co-author with Peter Senge of a new book on implementing learning in organizations (Senge et al, 1999). First, free agent learners may threaten organizations because they are "less willing to do what they're told and more eager to challenge authority. . . . Another way free agent learners threaten companies is that they expect their eduation to be used *and* expect to be rewarded for having obtained that education. If neither happens, they're all too willing to walk." (Ibid).

Conceptual Framework and Methods for Studies

Many of the studies reported in this paper are included in a recent volume of findings from research on informal learning in the workplace (Marsick and Volpe, 1999) which compliment earlier work around a theory of informal learning (Marsick and Watkins, 1990; Watkins and Marsick, 1993; Cseh, Watkins and Marsick, 1999). The two studies additional studies in this paper, that of Cseh and of Watkins and Cervero, extend the findings from the 1999 volume by focusing on recent developments in global management and professionalization. The model of informal and incidental learning developed by Marsick and Watkins is based on the work of John Dewey (1938) and Kurt Lewin (1935) and on thinking of scholars who have further elaborated an understanding of learning from experience within social settings (Argyris and Schon, 1978; Mezirow, 1991). The model suggests that people learn from their experience at work when they use challenges and problems as triggers for re-examining their understanding of a situation. The context comes to the fore because the environment is so turbulent, and little can be taken-for-granted. People need to re-examine assumptions about the context as they consider alternative actions, make choices and decisions about action, and gain new knowledge and skills to implement chosen alternatives. They can learn from intended and unintended consequences, and through a review what has occurred in order to extract lessons learned.

All of the studies reported in this paper are exploratory in nature, and most rely primarily on qualitative data collected through some combination of interviews, critical incidents, and observations. One of the studies also utilized a survey (Watkins and Cervero, 1999). The conceptual framework for these studies focus in some way on learning from experience, critical thinking, and the role of environmental factors in learning. Data are typically analyzed using the constant comparative method of content analysis, and often draw on elements of grounded theory (Glaser and Strauss, 1967; Strauss and Corbin, 1990). Studies typically use convenience samples that are selected with criteria in mind that will enable researchers to shed light on the phenomenon they are trying to explain. Hence, each study speaks to a unique situation or context, and cannot be used to generalize results. However, taken together and considered theoretically, the studies provide a basis for thinking conceptually about the informal learning of free agent learners. We use the data to pose questions for further consideration in relationship to research and practice.

How People Master Environmental Changes in the Workplace

As an HR professional, I undertook an interpretive case study in the late 1980's to understand how people learn to master environmental changes in the workplace (Volpe, 1992). My overall goal was to be able to uncover new approaches and strategies to help employees in my own work as a Manager of Education and Development in a large multi-national corporation. The corporation had implemented major changes involving large-scale downsizings and reorganization that affected all parts of the organization. These changes were initiated by a newly installed President and a new Chairman. These events radically changed the corporate environment and, as such, it was logical to assume that it would have at the very least a disconcerting affect on employees. Given this set of events, I wanted to understand the extent and the degree of impact environmental changes had on the people in the organization. I made the following assumptions: 1) most learning in the workplace occurred in informal, non-structured situations; 2) the need for continuous informal learning heightened during periods of intense organizational change; and 3) an implied social contract existed between the organization and its employees.

Lewin's (1935) theories provided the overriding construct for analysis and synthesis of the research findings. Lewin proposed that human behavior is a function of both the person and the environment – expressed in symbolic terms: $B = f(P,E)$. This proposition seemed appropriate for understanding the learning behaviors of a represented segment of employees in the context of large scale change. Lewin advanced the concept of the life space by drawing on his understanding of the interaction between a person and his/her environment and the principle of contemporaneity (i.e., that only present facts can produce present behavior). Life space refers to the whole of psychological reality. It is the totality of all possible coexisting facts that influence the behavior of a person at a particular time. In other words, behavior is a function of the life space at a given time. The boundaries surrounding the person in the life space are permeable as are the boundaries that separate the life space from the greater physical world. Given this property of permeability, facts in the psychological environment can materially influence changes in the psychological environment. However, a fact must exist first in the psychological environment before it can influence or be influenced by the person.

Lewin's theory in and of itself was not sufficient. I drew on frame theory described by Bolman and Deal (1984) to analyze the organizational environment of the corporation. Consistent with Lewin's equation that behavior is a function of the interaction of person and the environment, Bolman and Deal provide a four-frame or four lens approach through which to analyze the organizational environment. These four frames are: 1) the ***structural*** – having to do with all of the systems in place, how the corporation is organized and how it operates; 2) the ***human resources*** – refers to people issues, benefits, rewards, relationships, development, etc.; 3) the ***political*** – concerns the allocation of scarce resources, negotiation, bargaining, gaining advantage, etc.; and 4) the ***symbolic*** – the symbols that giving meaning to the corporate image. No one frame is better than another, they are simply windows through which to understand and analyze an organization.

Informal Learning: Interpreting the Changed Context

While this study set out to examine how the sample group learned to master change, a key finding revealed that the overriding issue for participants was to ***interpret and understand the changed environment***. This preoccupation with interpreting the environment serious hindered learning informally because participants no longer held the same general view of the environment. Three distinct perceptions of the new environment emerged among participants and each of these perceptions held different implications for what needed to be learned:

1. Some held simply that the nature of work had changed and therefore the challenge was to learn the new ways of carrying out work, the new rules, roles and key players.
2. Others focused almost entirely on the fact that the company was no longer paternal and that the social, unwritten, contract had been broken. For this group, their learning was more introspective as they struggled to overcome their feelings of betrayal and re-examined their relationship and attitudes toward the company.
3. The most predominant group among all the participants were those who held the view that the environment was now highly political and one had to scrabble – often at the expense of others – for the scarce resources in the company.

All of these perceptions had an impact on the former practice of learning informally. Those who were introspective, whom I called the Heart Broken, were so intensely involved in their own feelings, they had nothing left to help others learn. Those who perceived the new environment as now highly political were unlikely to share information with others – these were the Politicals. Thus, the remaining group, named the Structural, were those who focused on the changed nature of work. This group had far few people with whom they could share information. In light of this scenario, the informal network of learning had severely broken down.

Implications for the Free Agent Learner: Capacities of Human Resource Developers to Support New Learning

Questions posed by this study point to what is or isn't known about the capacity of human resource developers who are expected to facilitate the development of free agent learners. These findings were among the earliest indications that the primary responsibility for learning had shifted from the employer to the employee. The message was loud and clear — the organization was no longer paternal. Each employee would need to begin a process of continuous learning in order to develop the skills needed to survive and thrive in a continuously changing environment.

In a more recent article appearing in the August 1999 issue of Training and Development, Caudron provides an update on the learning attitudes and strategies of today's employee whom she calls the "Free Agent Learner." What began, almost under duress in the late 1970's and throughout the 1980's and 1990's has now become the new reality. Each individual is responsible for his / her own learning, for acquiring the skills needed in a continuously changing technology driven work environment. And the author tells us that today's employees are relentless in pursuing and achieving their learning goals. At the same time, Caudron points out that this new fierce individualism has had an adverse impact on today's modern organizations. She says many companies risk losing the brightest and best unless they find new ways to reward competent employees.

This study left many questions unanswered about learning in the face of the breakdown of networks and other mechanisms on which people had formerly relied for development. Free agent learners probably have totally different needs and may use the same mechanisms in different ways. Human resource developers, many of whom were participants in this study, were themselves struggling with the meaning of rapid change, and therefore, with appropriate ways to create and support new approaches to learning. A study of human resource developers who feel they have successfully made this transition might identify critical strategies that used to move forward and to then use insights from their own experience to assist others. It would also be valuable to find out if younger people in human resources, who began their work under a different set of assumptions about the psychological contract, approach the support of free agent learners in entirely different ways.

Critically Reflective Learning

Informal learning by free agents in organizations can be facilitated in three ways: the mental capacities of the learner, the quality and quantity of interactions between organizational members, and organizational structures. Brooks (1989) conducted a divestiture study that was focused initially on the informal critically reflective learning strategies of managers in one of the Baby Bell companies at the time of divestiture in the mid-1980's. The rationale was that the transformation from a regulated to a market-driven company provided a prototypical case of the kind of learning that was going to be required of all of us as we moved toward increasingly global and technologically-driven societies.

This study was conducted in one of the Baby Bell telephone companies during divestiture. The employees were being asked to re-conceptualize their work. The organization did not use the term "free agent learner," but the leaders of the company did ask employees to function in a more proactive manner in an environment where the rules of the game were clearly changing. The study assumed that employees undergoing such a radical change needed the ability to reflect critically on themselves and the organization. Critical reflection was defined in terms of the capacity to identify and examine assumptions that shaped one's actions.

The study was a qualitative case study. The sample was identified by asking the corporation's senior internal organization development consultant to identify people he thought questioned the status quo and regularly took action to make change happen. A snowball sample of 29 managers was identified starting with this groups: 21 who consistently were named as being critically reflective (including enry level managers up to and including the chairman and CEO); 4 who were consistently identified as not being critically reflective; and 4 who were consistently named as having made a dramatic shift from not being critically reflective to being so.

Informal Learning That Was Critically Reflective

A review of some of the findings from the original study is useful for the insight they give us into the development and process of informal critically reflective learning. Different managers cited the following in-company experiences as having been central to their development of critically reflective learning skills:

- they had had a variety of work experiences within the company
- liberal arts education
- consciousness-raising seminars
- open-ended assignments
- modeling of critically reflective learning by others
- encouragement of questioning
- honest feedback
- participation in policy-making and implementation
- intercultural experiences (not necessarily part of an in-company experience)

In addition, critical reflection seemed to include some combination of the following mental and emotional strategies:

- empathic viewing of things from another's perspective
- listening to intuition
- examining an issue from different perspectives
- monitoring thought processes (maintaining honesty, dealing with "real" issues, resisting categorizing people, looking for opportunities in any change situation)
- information gathering
- experimenting
- accepting help from others

Given these findings, informal critically reflective learners appear to have several needs: (a) a variety of job experiences, (b) clear goals, (c) access to information from the top, (d) exposure to multiple perspectives, (e) a chance to see what others are rewarded for, (f) freedom to determine their own paths to goal achievement, and (g) help in learning critically reflective learning strategies. Critically reflective learners are clearly proactive and want the organization to provide opportunities and resources for their learning without constraining their freedom to set and pursue learning goals of their own choosing.

Implications for the Free Agent Learner: Deign of Motivating Career Systems

One question posed by this study for practice is as follows: What kind of career system would attract, develop, motivate, and retain this kind of employee? An organization like the Baby Bell in this study said that it wanted an employee who is self-directing but a team player, critically reflective but creative, and takes initiative but acts responsibly. The following is a proposal of some of the important elements of such a career system. It is based on Liebowitz, Ferren, and Kaye's (1989) framework for thinking about how human resource structures can link to career development (p.41). It addresses such aspects of career development as job acquisition and movement, development and reward, organizational information and planning, and individual information and planning. Its components include the following:

- Job acquisition and movement
    - Job description – in terms of goals of specific job
    - Job posting – on intranet
    - Recruitment – inside first, then outside
    - Transfer/promotion – can be initiated by employee or supervisor/employee rewarded for transferring to a position in which they can be more productive
- Development and reward
    - Training – employee chooses and pays for own formal training and education.
    - On-the-job developmental opportunities - Supervisors and managers rewarded for developing employees.
    - Compensation – awarded for concrete accomplishments that contribute to the goals of the organization. Determined in negotiation with supervisor or manager. Compensation records for all employees are public documents.
    - Benefits – basic benefits provided for everyone. Extras can be used in lieu of compensation.
- Organizational information and planning
    - Strategic planning – open-information. Employees rewarded individually or as team for concrete accomplishments that contribute to achieving strategic plan goals.
    - All succession positions are interim until a permanent person is recruited.
    - No skills inventories maintained since jobs described in terms of goals and many paths exist to the same end.
- Individual information and planning
    - Performance appraisal – performance appraised according to projects accomplished leading toward organizational goals. All employee reports of yearly performance are open information.
    - Company and employee split the cost of career counselors to help employees.

The above proposal is radical in that it dispenses with some of the shibboleths of "good human resource" management such as yearly performance appraisal, control of information, central control, and standardization. However, it is worthy of consideration in that it demonstrates the inseparability of freedom and responsibility. Employees can only take responsibility for their own performance and act as free agent critically reflective learners to the extent that they have the freedom to critique the systems within which they work and to transform those systems in ways that better meet company goals. Like all organizational structures, a career system can be developed to facilitate the development of such employees.

Learning to Become an Effective Team Member

One skill that has been identified as critical in meeting the challenge of the changing workplace is the ability to work as part of a team (Stephans, Mills, Pace, & Palphs, 1988). This ability is essential to successfully counter the high level of uncertainty experienced by workers faced with new technologies (Jacobs & Everett, 1988). Copeland (1988) — a researcher who focuses on diversity and multiculturalism in organizations and associated training and development activities — contends that team building is critical to managing a diverse multicultural workforce. Although education and training departments have developed numerous team-building programs to address changing human resource development needs, they have focused primarily on formal learning strategies. Yet, we know that only 10 to 20 percent of what employees learn comes from structured training (Marsick &Watkins, 1990).

A study conducted in 1990 explored how employees in a medium-sized, community-based, non-profit social services agency learned informally to work more effectively in teams. The agency serves women, minorities, and others in transition by providing legal advice, social assistance, education and training, and job placement services. Like many other non-profit agencies, it depends largely on public funding and on sources of "soft" money. Thirty employees participated in the study. They came from the managers' team, the public policy and development team, the management team, and the clerical team. They worked in different functions and were diverse in age, ethnicity, gender, and educational background. Interviews, written critical incidents, and document analysis were techniques used to collect data. The participants also wrote up critical incidents, specific descriptions concerning how they understood teaming and how they learned to become members of teams. In addition, three team meetings were observed. The study shed light on the nature of teamwork, on strategies that are utilized to learn informally to be an effective team member and on facilitators of and barriers to learning effective team membership.

Strategies for Learning Effective Team Membership

Participants in the study described the strategies they used to learn effective team membership. Strategies included: structured on-the-job training, informal personal learning, and informal interpersonal learning.

Of the formal learning strategies used, structured on–the-job training — consisting of coaching, creating learning opportunities, and learning effective listening skills and feedback techniques — was portrayed as the most effectives. Participants described access to new learning opportunities and effective feedback as critical to their growth as team members, as professionals and as individuals. These aspects of structured on-the-job training were important because they provided opportunities for employees to use informal learning strategies to add new skills to their repertoire, to affirm existing skills, and to consider how the newly learned skills might apply in a variety of settings.

Although the study participants cited both personal and interpersonal informal strategies as helpful in learning to be an effective team member, personal strategies were the most frequently used. The participants identified these strategies as questioning, listening, observing, reading and reflecting. Questioning, listening reading, and observing were useful to obtain help, information, or support; to learn from alternative viewpoints; to gain the ability to provide effective feedback; and to consider alternative ways of thinking and behaving. However, only reflection allowed participants to form judgments about what was learned and to make decisions about current, future, and alternative applications of what was learned. They also used reflection to assess both the process and the outcomes of their learning experiences and of their interpersonal and trial-and-error experimentation. (Trial-and-error experimentation refers to reflecting on errors that occur because of what was done, on what was not done, or how something was done.)

The interpersonal informal learning strategies identified by the participants were mentoring, coaching, networking, and modeling. These learning strategies have been noted in the literature as powerful informal learning tools. They were not so regarded by the participants in this study, however. In fact, their descriptions of interpersonal informal learning strategies indicated a perception that the major purpose of networking, coaching, and modeling was to provide access to instructional materials or resources — that is, people materials and events — to help them in the learning process. Given this perspective, it is not surprising that the study participants cited modeling and networking as the most beneficial aspect of the interpersonal learning process. Through networking, participants were able to ask question that were meaningful to them and to obtain help, information, or support regarding effective team membership. Similarly, access to models provided opportunity to observe alternative ways of behaving. The reflective dimension of learner-centered, learner-initiated learning strategies solidified the learning that occurred among the participants.

The study participants described factors that facilitated their learning as effective leadership, effective facilitation, interrelational aspects of teams, and individual characteristics and capabilities The role of team leaders was characterized as one of establishing the parameters of the team. The purpose and philosophy of the team as well as certain structural aspects of the team must be specified or negotiated by team leaders if members are to participate fully in team activities and benefit from the learning opportunities presented for team development. The study participants defined effective facilitation as providing an operational structure that ensures efficient team activity. Interrelational facilitators of effective team membership were defined by participants as practices that promote participation and maximum productivity from team members. Finally, Individual facilitators were identified as a propensity for teamwork, high self-esteem, and the perception that one is an asset to one's team as individual characteristics that facilitate the learning of effective team membership.

Implications for Free Agent Learners: Integrating Informal, Personal, and Interpersonal Strategies for Learning

Human resource development professionals can use informal, personal, and interpersonal learning strategies to aid in team building. Team members can be empowered by recognizing and using informal personal learning strategies. Participants were easily able to discuss formal strategies they used to learn to be effective team members. They were less able to discuss the informal strategies they used. But talking about these strategies increased their awareness of the power and effectiveness of informal learning strategies. Participants noted, though, that informal learning strategies carried less credibility than formal strategies in their own minds and within the organization. The lack of credibility became a disincentive to integrating the informal learning processes into their practice. This would sorely limit the learning of the organization as managers, supervisors and coworker fulfill the trainer's role and extend the community of learners, thereby creating a dynamic learning environment.

The findings of this study also have implications for management personnel who have responsibility for developing participatory practices — that is, teamwork — in the workplace. Under the best of circumstances, the manager's role can be extended to one of educator and the production mode to one that includes learning. Knowledge of personal learning strategies and the environments that facilitate their use are invaluable to team development.

Partners in Learning

When paramedics suggest that "two heads are better than one," they are speaking from experience about the importance and potential of the unique working relationship that occurs between the men and women who staff our nation's ambulances. For paramedics almost always work in pairs — partners who respond to calls for emergency medical care that range from the ordinary to the terrifying. However, their statement also raises questions. Although considered equal by the state certifying agency, do these paramedics consider each other equals? Do they contribute equally to a partnership? How do partners complete the tasks of the job? Is the partnership an effective means for accomplishing the job? The answers to these questions exist in the type of partnership that develops when two paramedics are assigned by the organization to work together. These pairings have a direct bearing on what paramedics learn about how to accomplish the tasks of the job and how effectively these tasks are completed.

The nature of the paramedic partnership as well as that of the work itself, which occurs as a daily series of discrete events, provided the setting for a qualitative case study of informal workplace learning conducted by Larson (1991) [who now goes by the name of Lovin]. Twenty male and three female, full-time paramedics employed by a large southeastern provider of emergency medical services (EMS) participated. Each participant had had a variety of partnership experiences lasting as long as several years or as brief as one shift. Through written responses about the challenges of the job, individual semi-structured interviews, and extended observation of select participants, a picture emerged of distinct partnership types. How the study's participants handled the tasks of the job and what they learned from these experiences was directly affected by the types of partnerships each had developed with various partners during their periods of employment.

Informal Learning Strategies

Three less-than-ideal partnerships are evident from the study. The *potentiated* partnership, in which a paramedic mentor is paired with a probationary paramedic, is either an initial or remedial partnering experience. It is effective in the sense that mentors impart the organizational culture and customs while mentees admit to trusting what they learn from their mentors. However, potentiated partners do not consider each other equals. Mentors admit that they do not trust their partners. With patient lives at stake, mentors repeatedly take over patient care. The partnership yields to a single practitioner and the potential in the pairing is lost.

When experienced paramedics are paired for limited periods, an *additive* partnership is common. Here, the effectiveness of the partners is never enhanced by their working together because neither partner places value on the partnership. While job tasks are accomplished, the partners behave as if they were working on their own. This pairing is clearly a source of dissatisfaction to participants who recognize that it negates the potential inherent in a partnership. Further, there is no evidence that participation in either an additive or potentiated partnership is a useful strategy for learning how to be an effective, contributing partner. Such learning is not recognized as useful or necessary.

In an *antagonistic* partnership, each partner feels total responsibility for completing each job task. In such a performance, as partners interfere with each other's activities, duplication occurs, effectiveness is sacrificed, and the potential of the partnership is lost. Again the culprit is lack of trust. The promise resides in a willingness of the partners to develop that trust and move the partnership forward.

Only the *synergistic* partnership achieves the potential inherent in pairing two paramedics. Here the whole is greater than the sum of its parts. The participants describe "two people that act as one," "just mesh," and "never say a word but talk the whole time, almost like telepathy." These paramedics also recognize that the development of the synergistic partnership is a learning process undertaken not because of any directive from the organization but because of a perceived need-to-know. The pathway to the synergistic partnership is through the antagonistic partnership; for only here do individual paramedics come to recognize that the challenge of knowing how to effectively work with a partner may be as important as knowing how to handle the tasks of the job. If they then invest the time, energy, and attention necessary to this learning project, and if the project is not disrupted by organizational reassignment, it is often highly successful.

Learning from experience occurs most often when the learner is faced with an event or situation that is recognized as disconcerting or nonroutine. The daily work of the paramedic is to handle routine and nonroutine situations. The paramedics identify the nonroutine situations of their job as sources of learning. The four types of partnerships can also be categorized as either routine or nonroutine. Potentiated, additive, and antagonistic partnerships are viewed by participants as perplexing, uneven, and insecure. As such, all three partnerships are nonroutine. The remaining partnership, the synergistic partnership, is the only one that can be classified as routine because it is viewed by partners as stable and non-threatening. Organizational staffing practices may then present each paramedic with a workplace relationship which can be as disconcerting as many of the experiences of providing emergency patient care. While this suggests that the partnership may also be a learning opportunity, that is frequently not the case.

When presented with competing information, individuals make choices about where to focus their attention (Marsick & Watkins, 1990). Given the needs of patients in non-routine emergency situations, paramedics in nonroutine partnerships ignore the partnership in favor of caring for the patient. Doing so requires that they handle the situation as individuals which all but eliminates the effectiveness expected from the partnership. Even when the situation is routine, the approach of these paramedics is to continue to handle the situation as individuals, this time in tandem; one assumes a leadership role and the other follows. Throughout most of the time paramedics work together in nonroutine partnerships, each paramedic ignores the partnership in favor of completing work tasks because neither perceives a need to learn how to partner.

The effectiveness of pairing two paramedics is evident when synergistic partners handle routine and nonroutine work assignments. Because the partnership is routine the partners are free to focus on the task. These tasks are accomplished in a spontaneous fashion in routine situations and in a synchronized manner when the experience is nonroutine. Working together to complete these tasks is often a source of significant learning, for the potential for learning is not only in the task itself, but in how the task is viewed in terms of the partnership.

Implications for the Free Agent Learner: Jobs Designed to Consider Interpersonal Rapport and Trust

One question posed by this study for practice is as follows: How can organizations provide greater choice in job design and job assignments to free agent learners whose performance and expertise clearly depend on interpersonal rapport and trust among those who work closely with one another? There appears to be an increasing demand by the public for mistake-proof job performance from health care providers. In response, EMS organizations are providing additional content-based continuing education in an effort to insure that individuals are current in the subject matter of the discipline. Yet this study and the paramedics themselves say that most of their learning occurs informally as part of the job. In addition, it seems clear that the nature of one type of workplace relationship, the paramedic partnership, directly affects if, what, and when this self-directed learning will happen. And further, the ability of paramedics to respond in the most effective way to each patient care situation depends on the existence of the synergistic partnership where partners trust each other and consider each other equals. In direct contrast, most EMS organizations staff ambulances based on the assumption that any two certified paramedics versed in the organization's operating policies and patient care protocols will provide the same level of job performance in a given situation.

Rethinking how emergency service is provided from the point of view of the paramedic means addressing the importance of on-the-job self-directed learning and synergistic partnerships to the overall organizational effectiveness. With recognition of the importance of the partnership would come policies and procedures which bring consistency to staffing practices and no longer consider paramedics to be interchangeable parts. The development of synergistic partnerships would not be left to chance.

Formal and informal learning opportunities would emphasize the dynamics of working relationships so that individual paramedics would be adequately prepared to work effectively as partners. Strategies which could enhance self-directed learning would be discussed in terms of the needs of the learner. Lessons learned through on-the-job self-directed learning would be valued and opportunities provided to share and validate this learning. And finally, individuals working and learning effectively within partnerships would receive support and recognition from the organization and see the results of their efforts confirmed in the improved quality of care provided to patients.

Meaning Making in a Small Family Business

The owners and managers of a small family-owned printing business experienced a jolt when they received the financial reports that showed production was up, customers seemed satisfied, employees were working longer hours but profit was perilously down. In addition, the owners had lost interest trying to solve the myriad of problems that rarely seemed to change. The 45-year-old business had never before faced this same set of circumstances. To confront this threat to the survival of their business, the owners led an intensive learning journey to re-vision the future they would need to create to renew the company. No map existed to guide them through this transformational process.

Mary Ziegler conducted an interpretive case study to assess how the owners and managers of this small business perceived the changes that occurred in the company approximately eight months after they began their re-visioning process. Research questions included: 1) how does learning become part of the fabric of a business culture? 2) How does a company develop the capacity to become a learning organization? 3) Is organizational learning different from individual learning, and if so, how is it different?

Informal Learning Strategies

Findings resulted in provocative insights into how informal learning takes place at the individual and organizational level, particularly the way it denotes the beginning stage of intentional organizational change. The term "awakening," used metaphorically by the respondents, captures their perceptions of the changes that occurred in the company. Awareness and insight, the first step in the change process, consisted of making meaning, challenging mental models, and experimenting. These learning strategies sensitized the company to the intentional learning activities that followed and proved to be far more ambiguous, messy and elusive than is depicted in the popular management literature.

Making meaning of their organization and its need to change was a critical step in their learning process. As one owner said, "Understanding the whys has a lot more to do with things than understanding the hows. . ." Rather than attempting to solve the next problem, they began asking why they *had* the problem and what the underlying causes might be. Understanding the reasons for everyday activities had gotten lost over the years. Inquiry was a fundamental strategy for making meaning. They learned that common terms did not have common meanings so they explored and defined these terms and shared their new meaning with others. Intense involvement in the learning process enabled them to begin challenging their mental models. People made meaning by asking questions. They inquired into what terms and events meant, and then defined those terms and events to clarify them.

Mental models (Senge, 1991) are common taken-for-granted assumptions about reality. They are so ingrained they direct behavior yet reside outside normal awareness. When describing the change process, owners and managers reported that they had ceased clearly seeing their company because routine and habit had blinded them to the obvious issues that were jeopardizing the company's future. By attending and reflecting, becoming aware of their assumptions, and challenging the long-held company beliefs, they began to think of their environment in new ways. They became aware of the skills they needed to increase in order to increase their confidence to make the changes they wanted to make. Challenging beliefs was at the heart of change. As one supervisor said, "It takes a while to change your thinking. But you have to change how you think before you can change the way you do things."

Respondents reported that they acquired new skills by learning how to do things that they were previously unable to do. Although the skills being developed span a wide range, three skill areas stood out – interpersonal, cognitive, and technical. Most respondents reported that interpersonal skills were the principal skills they needed to develop. Listening was highlighted as a critical communication skill. Cognitive skills were cultivated as people began to document existing work processes, identify problems, search for root causes, and formulate solutions. Technical skills resulted in new technologies that enhanced the development of interpersonal and cognitive skills as well as improvement of work processes. These informal learning strategies – making meaning, challenging mental models, and learning how – were not separate from work because work provided the context that enabled the learning to make sense.

Although this study provided clues that would help a practitioner guide a small business through the start-up of a learning initiative, adult educators need new tools to help people in organizations develop their learning capacity and bridge the gap between thinking and acting.

Implications for the Free Agent Learner: Dilemmas, Implementation Issues, and Commitment

This study poses three questions in considering the learning of the free agent learner. First, how can people who began work under one dominant paradigm around learning resolve conflicts and dilemmas posed as they attempt to live and work in a new paradigm? The informal learning strategies the owners and managers used proved to be far more ambiguous, messy and elusive than is depicted in the popular management literature. In the change process, the old and new exist side by side. In one situation, it may be possible to think and act according to a new belief, while in another situation, the new belief may not emerge at all. What strategies to individuals use to deal with the inconsistencies of the learning process? Is this conflict less intense for younger free agent learners who come to the organization without as much prior mental "baggage" even though they may be impatient with the organization because it has not caught up with their mental model?

Second, what are the elements of the crucial step between taking on new convictions and implementing new behavior? The study reveals a large gap between acquiring new knowledge and the ability to effectively take action that is consistent with new understanding. The inability to convert new convictions into practice is a critical juncture in the learning process. For many of the respondents, this inability led to frustration with the learning process and with themselves as learners.

Third, what are the attributes of commitment to the deep kind of learning and change that was evident in this study? If we knew more about commitment, could we help people persist through the difficult stages of the informal learning process when the change demanded is so great? The study suggests that learning requires commitment. As informal learning begins, the commitment to learn may be implicit and outside conscious awareness and therefore difficult to access. Commitment enabled the respondents in this study to overcome significant obstacles to learning.

Unlearning in Eastern Europe

The study of the informal learning of managers in a rapidly changing Eastern European country leads to a focus on "unlearning." As Villinger (1996) stated: "The learning process necessary in East European enterprises also implies a great amount of forgetting. Differentiating between unlearning, on the one hand, and relearning or rather new learning, on the other hand, promises further interesting considerations with respect to the learning process as a whole" (p. 191). The discussion in this paper is based on a study bu Cseh (1998).

The purpose of Cseh's study was to examine the critical learning experiences which enabled owner-managers of small private companies in Romania to lead successfully in the transition to a free market economy, to determine what triggered their learning, what strategies they used, and what lessons they learn. Information rich cases were collected through 18 in-depth, face-to-face interviews with owner-managers of successful (on the top list of companies compiled by the Chamber of Commerce at county and country level) small (2-99 employees) Romanian private companies. The interviews were conducted in Romania at the end of 1996 and beginning of 1997. Managers were asked to describe at least three critical incidents from their managerial practice. A total of 72 critical incidents from 15 managers were analyzed for this study. The 15 managers selected for this study were between 28 and 62 years of age. They were selected to represent both genders and the nationalities (Hungarian and Romanian) specific to the two regions represented. There were six ethnic Hungarians and nine Romanians, and four female managers selected in the sample. The managers were highly educated and obtained their degrees and certificates from Romania. All but three of the managers had a university degree and one of them had a doctorate degree.

Informal Learning Strategies

The learning of the owner-managers was stimulated mostly by the ambiguity of a quasi-market economy. All the managers gave detailed accounts of their perception of the economic, political and social context in which they worked. Managers framed the business context in terms of the economic system (no help from the banks, the impact of high inflation and high taxes, uncertainty and instability) or the need to work with the government and state-owned-companies (no help and support from government and problems in dealing with state-owned companies). The economic system and the government institutions in place offered very little support or sometimes even seemed to raise barriers in the way of the small private businesses. Managers encountered people who worked within an old [regime] mentality/business work ethic; and they lacked professional and financial resources.

One of the major lessons learned by the owner-managers of small, successful businesses in Romania who participated in this study was that although many changes took place since the collapse of the communist regime, little has been changed in the way human relationships in conducting businesses were governed. Thus, those managers who did not have managerial experience in the previous regime had to learn how to work with the government and state-owned companies while those who had previous experience did not have a chance to forget or unlearn previous practices.

Almost all of the managers talked about their problems in working with state-owned companies which still have the monopoly in a lot of fields and especially as suppliers of raw materials. These companies also prefer to work with other state-owned companies, leaving the private companies on the fringe. Describing the preference of state-owned businesses to deal with their own, one of the managers who did not have managerial experience in the previous regime said:

> They [state-owned stores] know that my products are good, but some of them just couldn't care less, and they say, "why should I buy from him when the state-owned company's products are good enough?" ...These old ways of deal makings are still in place. ... If I told them to compare the two products, they told me, "No, last year we bought our products from them, too." This is exactly like the story with the street curve. Yesterday I drove in the other lane to cut the curve and nothing happened, so I can do it again today. They also bought the same products last year from that company, so this is the mentality.

The managers talked about their encounter with the old [regime] mentality/business work ethic of employees, other managers, people in general which unfortunately did not change and how that influenced their work. One of the managers stated that: "to change people's mentality is the hardest thing to do. ...Time and education is needed, just like the communist system developed in fifty years its own kind of people. I am not saying that fifty years are needed to change people but at least a minimum of twenty five years is needed to develop a new generation who can really live and work in a democratic society."

Another manager talked about the mentality of some other managers in Romania. He said:

> And talking about managers, I think that they should try to gather good people in their companies, but this is again a contradiction of the previous mentality when the boss tried to get rid of all the good employees in order to eliminate potential competitors. You see, there are things like these which bring extraordinary contradictions and create problems because a lot of people have still the old mentality. They cannot realize

> that if you have a good company and you gather around you only incompetent people you are doomed to failure together with your company. (p. 7)

Implications for the Free Agent Learner: Nature and Facilitation of "Unlearning"

This study poses questions for research and practice around the nature and facilitation of "unlearning." According to Mariotti (1999) a major obstacle to embracing rapid change is that change requires people to unlearn old behaviors if they are truly to benefit from new learning. As Lei, Slocum & Pitts (1999) contend "Unlearning past management behaviors may hold the key to gaining momentum for change" (p. 24). Ramsey (1999) reminds his readers that much of what worked yesterday is unworkable today. In times when new developments are regular occurrences, each day presents unique challenges and new lessons to be learned and it is important to remember that part of progress and improvement is unlearning some of the old lessons that no longer are relevant to current conditions.

> Addressing the need for learning amidst continuous changes McGill & Slocum (1993) believe that "organizational learning is about more than simply acquiring new knowledge and insights; it requires managers to unlearn old practices that have outlived their usefulness and discard ways of processing experiences that have worked in the past. Unlearning makes way for new experiences and new ways of experiencing. It is the necessary precursor to learning" (p. 79). They believe that for an organization to unlearn, it needs to free managers and their organizations from roadblocks that hinder learning and embrace new practices.

According to Magrath (1997) unlearning occurs in almost all forms of adult learning. In athletics, delays from unlearning occur regularly. In trying to improve a golf grip or swing, you must unlearn the one you've used for years, which has become second nature to you. Switching between relatively similar sports or art forms shows this unlearning phenomenon most clearly (e.g. from tennis to badminton, from ice-skating to roller blading, from skiing to snowboarding; from watercolors to oil painting). In the early 1960s, when America's finest young jet-fighter test pilots became NASA astronauts, they also had to unlearn many of their skill sets. The author believes that unlearning delays come from three sources - physical (dexterity unlearning is very awkward), emotional (pride can get in the way when trying to master something new where unlearning is required), and psychological (people have built-in defense mechanisms that send them back to their comfort zone). He also observed that until the unlearning process is not on its way the progress of learning is slow and proposed the following strategies that can help unlearning: total immersion often works better than staged learning; get help from a coach or mentor; learn with other learners at your own level; determine whether you need to be an expert or merely capable at the new learning; and when you become discouraged by unlearning delays take time out for studied inspiration by reading about those who succeeded.

According to Solovy (1999) to understand unlearning, one should begin with a concept known as the dominant logic. It states that "managers make decisions based on their preconceptions of the business and the environment. The dominant logic is the sum of current corporate assumptions and institutional history. It acts as a filter, focusing corporate learning only on data that conform to it. In other words, the process of turning information into intelligence is biased. As a result, firms miss opportunities and struggle to change" (p.30). In any change effort climbing the learning curve is only half the process. The other half is the unlearning curve sometimes called the forgetting curve which suggests that when a promising new idea fails, the dominant logic is getting in the way. As Magrath (1997) described:

> Human potential and competency development are always works-in-process, whether in a business or nonbusiness setting. If all learning were instantly acquired without unlearning delays, we might be less reflective, less connected to, and less conscious of our own human histories and, indeed, less insightful in distilling their meaning. We might be 'all acceleration with no steering.' Unlearning is as necessary to learning as light is to shadow in an oil painting - without one, the other has no depth, no definition, no brightness. (p. 41)

Peters (1994) also talks about the importance of learning and forgetting. He states that "We rarely, if ever, directly discuss inducing forgetfulness. Planned forgetfulness? Culture busting?" and he poses the following two questions that should be addressed in strategy meetings: "What do we know that we believe for sure? How do we systematically go about forgetting what we believe before it strangles us? " (p.128).

The challenge faced by Human Resource Development professionals is in managing both the learning and unlearning processes by developing environments conducive to them for the free agent learners. Younger generation free agent learners may not need to "unlearn" as much as will the companies they join. Managers and human resource developers who have worked with companies for many years may be set within mental models that are no longer appropriate to the support of the free agent learner. On the other hand, it is also true that companies cannot benefit from what free agent learners bring unless both sides can open up a dialogue in which to explore constructively different points of view. Both sides may need to surface and examine assumptions that they hold that affect both the ideas that free agent learners bring, and the challenge that these ideas may pose to the way in which the organization has typically conducted business. As illustrated by the Eastern European managers in this study, freeing oneself from existing mental models that constrain the way work is done is not easy to do. Human resource developers will need to be skilled in change management, critical thinking, and constructive management of conflicting points of view to help all parties reap the benefit of the new ideas that free agent learners bring.

The Effect of Organizational Context on Informal Learning of Certified Public Accountants

Watkins and Cervero (1999) sought to determine whether two different organizational settings of CPA practice produced substantially different or equivalent learning opportunities for a practicing CPA. The study was conducted to provide expert testimony for a lawsuit. The CPA worked for approximately 2 1/2 years in a registered CPA firm, at which point he changed jobs and became an employee of a financial services firm that was not a registered CPA firm. The questions raised in the lawsuit had to do with the time needed in either environment for professional certification. The study drew on three sources of data. First, the researchers took a sample of the CPA's work history during the same six-month time frame in each of the setting exactly one year apart. Next, they constructed a survey that was answered by principals in the case to sample 31 possible formal, informal and incidental learning opportunities. Finally, they conducted interviews with the three principal parties to the case to identify examples and illustrations of learning opportunities available in each organization.

Informal Learning Strategies: Availability Within Each Organization

Analysis of the data showed that 25 learning opportunities were available at both organizations. The only differences were that the CPA firm had videotape courses and the financial services firm has not yet instituted these; and the financial services firm had tuition reimbursement while the CPA firm did not. The new CPA participated in 21 out of the 25 learning opportunities availiable at both organizations. The only differences were that he participated in the videotape courses at the CPA firm and that he has participated in professional association memberships at the financial services firm. Analysis of the critical incident interviews and work history documents showed that the new CPA had increasingly challenging work assignments and frequent opportunities for learning in both firms. He had 54 hours of continuing professional education at the CPA firm; he had 28.6 hours of continuing professional education at the financial services firm, but this was supplemented by 31.2 hours of professional reading for a total of 59.9 hours of learning within a comparable six-month time frame.

The new CPA's supervisor at both organizations confirmed that the CPA worked with the same range of clients at both organizations and that her supervision remained constant in both situations. The supervising CPA, a member of the senior manager at the financial services firm and former owner of the CPA firm, said that learning in a CPA firm derives from two main sources, the clients and the supervisory structure of the organization. These were largely the same at both organizations. The financial services firm is more diversified. People get training in a wider range of fields and have the opportunity for cross-training.The financial services firm has 7 officers and 55 workers, while the CPA firm had two owners and nine staff. Thus, there are many more individuals from whom to learn, both among managers and peers, in the new work setting.

Watkins and Cervero concluded that there was a strong culture of learning and support for learning at both organizations. The supervisory structure was set up so that learning was intricately woven into the fabric of work through the review process. Managers were seen as coaches and had an explicit model for doing this. The model consisted of these stages:

- prescreening of work for developmental readiness,
- preliminary coaching regarding salient issues to attend to in new projects,
- the individual performs the task and asks questions of the supervisor whenever anything comes up that he or she cannot answer,
- then there is a review by the supervisor with points to clarify,
- the individual resolves each point,
- discusses again with the supervisor.

- and a partner typically reviews it again.

Work was developmentally assigned according to the level of knowledge attained; and therefore, both workplaces were structured to support the evolving learning of a CPA and significant attention had been paid to creating a context supportive of learning in both organizations.

Implications for the Free Agent Learner: Habits of Continuous Learning

Professionals generally develop a habit of learning, a conclusion that is supported by over two decades of research (Houle, 1980; Cervero, 1988). Organizations can learn from the structures and strategies supported by professional service firms because they hold relevance for intrinsically motivated free agent learners. Without question, the major location of learning in this study was the professional's work settings. Scholars suggest that the most powerful learning in these settings derives from the particular work assignments and the ways in which the organization is structured to promote learning. Recent work on the learning organization suggests that organizations can deliberately and strategically build a continuous learning infrastructure (Marsick and Watkins, 1999; Watkins and Marsick, 1993, 1996). The organizational context can therefore be assessed for the degree to which it consciously provides opportunities for learning and development.

This study raises questions for learning from work by free agent learners in other contexts:

1. how individuals, under changing and challenging circumstances, perceive their work contexts;
2. how they decide what they need to learn and how they go about learning; and
3. how the organization supports or discourages these learning processes.

The organizational context matters by producing different work assignments, which, in turn, lead to different opportunities and priorities for learning. The organization can provide different incentives for learning such as tuition reimbursement, and can provide resources such as a library of reference material, subscriptions to professional journals, video courses, or computer-based courses. In particular, the organization can encourage peers to work and learn collaboratively (Marsick and Watkins, 1999; Watkins and Marsick, 1993, 1996).

Conclusions

Self-directed learning takes place just-in-time in response to a strongly felt challenge that is situated within a highly relevant context. Free agent learners are, theoretically at least, highly self-directed in their learning. The studies in this paper, however, point to the fact that much learning in work contexts occurs in unplanned ways. Informal learning might be intentionally sought by free agent learners, but informal learning is also tacit, non-linear, and serendipitous. The capacity of free agent learners depends, as well, on their ability to step back from their original perceptions and be open to other information in their experience: about themselves as people and learners, about others and the way they interact with them, about the dominant logic of their enterprise, about clues within the organization about priorities and valued practices, and about the nature of the external environment.

Organizations have changed the nature of the psychological contract, but they have not always adjusted systems, rewards, and cultures to support proactive, free agent learners. Organizations that want to keep free agent learners motivated and engaged need to:

1) make time and space for learning
2) provide mechanisms for continual scanning of the environment
3) stimulate heightened awareness around learning
4) build programs around goals and turning points
5) provide opportunities for reflection-in-action, and
6) work around problems engendered by climates that are often riddled with a lack of trust and high rewards for individual achievement at the expense of others with whom employees are supposed to collaborate.

Human resource developers have been adept at building visible, structured systems for learning that include training programs. It is much harder to create an infrastructure for informal learning that does not destroy what it sets out to encourage. The challenge is to build systems, rewards, and cultures that set high expectations around learning, provide resources and opportunities, create rewards that are appropriate for high levels of intrinsic motivation, and then get out of the way of those free agent learners as they set their own path to meet their own goals. On the other side, then, organizations must develop systems that enable and entice free agent learners to share what they have learned with others so that the organization also benefits from this enhanced knowledge. Organizations grappling with the meaning and practice of knowledge management are now in the throes of working through this kind of challenge.

As we close, we note that one cannot assume that organizations are benign in their expectations and incentives around free agent learners and around informal learning. Although not the subject of this paper, recent work by Garrick (1998) and by Casey (1999) attests to explicit and covert processes in organizations, and among learners themselves, that create a climate of exploitation and / or repression. Future researchers should continue to explore the shadow side of organizations with respect to informal and free agent learning.

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Identification of Power and Influence Styles in Program Planning Practice

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This study explores the relationship between HRD practitioners using different styles of power and influence tactics in designing and planning programs and organizational political contexts. Power and influence styles were identified through cluster analysis: Shotgun, Tactician, Ingratiator, and Bystander. Bystanders had moderate power based but scored highest on the measure of conflicting. Tacticians had relative lower power base and perceived moderate high conflicting. Ingratiators possessed highest power base but faced lowest conflict. Finally, Shotguns had relative low power base and perceived quite high conflict in the planing situation.

Keywords: Program Planning, Politics in Organizations, Power and Influence Styles

The purpose of this study is (1) to identify power and influence styles used by HRD practitioners in the practice of designing and planning education and training programs; and (2) to explore the relationship between power and influence styles and organizational political contexts in adult education program planning practice. Both popular writers about power and politics and theorists reasoned that individuals typically use a variety of influence styles in exercising power in their interactions with others. Several instruments have been developed to measure power and influence behaviors in organizations. They include Profile of Organizational Influence Strategies (POIS) by Kipnis, Schmidt, and Wilkinson (1980), Influence Behavior Questionnaire (IBO) by Yukl, Lepsinger and Lucia (1992), and Power and Influence Tactics Scale (POINTS) by Yang, Cervero, Valentine, and Benson (1998). Unfortunately, very few studies have been designed to identify empirically the mixes of power and influence tactics and their relation to organizational political contexts.

The process of designing and planning educational and training programs has been long conceptualized as a rational procedure, which normally starts from assessing training needs, setting learning objectives, to organizing learning contents and activities and ends with evaluating learning outcomes. Nevertheless, the practice of program planning rarely follows a linear progression as assumed by linear thinking (Brookfield, 1986; Cervero & Wilson, 1994; Pennington & Green, 1976). Cervero and Wilson (1994) conducted three case studies and found that power and interests are central to program planning. They maintain that "planning is essentially a social activity in which educators negotiate with others in answering questions about a program's form, including its purposes, content, audience, and format" (p. 28). They further proposed a negotiation theory of program planning. The underlying assumption of this theory is that educational program planning is a social activity, and the planner's action is contingent upon the social and organizational contexts in which the program is shaped. Consequently, any adequate theorizing of program planning practice should take into account the social setting, and it should be able to explain practitioners' planning behavior in the face of power. Human resource development researchers and practitioners have to understand that power and interests are involved in any HRD program. This is because ignoring political realities can be fatal to a program and even to the person who is responsible for the program. Unfortunately, little is known about how the HRD practitioners exercise their power and influence in their daily practice. In particular, there is a need to identify different styles of power and influence and their relationship with political contexts.

Theoretical Framework and Related Literature

According to Cervero and Wilson (1994), adult education program planning is a process of constructing educational programs and reconstructing power relationships and personal and organizational interests. A number of recent studies have shown the supporting evidence that adult education program planning is essentially a social process where politics matters (Cervero & Wilson, 1996; Yang et al., 1998). Yang et al. proposed a model of adult education program planning that specifies seven power and influence tactics in relationship with organizational political contexts. These seven tactics are: Reasoning, Networking, Appealing, Networking, Bargaining, Pressuring,

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and Counteracting. They further developed an instrument that measures power and influence tactics in adult education program planning practice.

Few studies have been conducted to examine power and influence styles in organizational political process. These studies typically use cluster analysis technique to identify groups of individuals who use their influence tactics similarly. In a pioneering study, Perreault and Miles (1978) identified five groups of influencers. The first group consisted of individuals who used multiple influence strategies. The second group consisted of individuals who used their expert knowledge as a basis for influencing others. The third group consisted of individuals who used friendly tactics. The fourth group comprised individuals who used their positions in the organization. The fifth group consisted of those who did not use influence of any kind.

By using hierarchical cluster analysis of six organizational influence strategies, Kipnis and Schmidt (1983) identified three styles that characterized the way managers influence subordinates. "Shotgun" managers used the most influence and emphasized assertiveness and bargaining; "Tactician" managers used an average amount of influence and emphasized reason; and "Bystander" managers used little influence. In a subsequent study of upward influence styles, however, Kipnis and Schmidt (1988) classified four groups of individuals. "Shotgun" individuals scored high on all six influence strategies scales, particularly assertiveness; "Ingratiator" individuals used an average amount of influence and emphasized friendliness; "Tactician" individuals scored high on the reason strategy and had average scores on the other influence strategies; and "Bystander" individuals has low scores on all of the influence strategies.

Although the previous studies on power and influence styles are enlightening, they failed to offer a conclusive identification of similar influence behaviors. Different studies have offered different numbers of meaningful clusters. In other words, we are not clear the types of political participants in organizational dynamics. Moreover, none investigated the relationship between power and influence styles and the political contexts.

Research Questions

Two research questions guided this study: (1) what is the meaningful classification of power and influence styles used by HRD practitioners in the practice of program planning? and (2) what is the relationship between the power and influence styles program planning and organizational political contexts such as power and conflict of interests?

Research Design

Participants

The study was originally designed to develop and validate an instrument measuring power and influence tactics in adult education program planning practice (Yang et al., 1998). A total number of 226 adult educators responded to a survey in the validation study served as the subjects for this study. Four clusters from a purposive sample were used to obtain the data. Members of four professional associations participated in the study: members of Georgia Adult Education Association, Academy of Human Resource Development, Georgia Association of Association Executives, and the Georgia Society for Healthcare Education and Training. For each of the four organizations, the membership list was sought and an adjusted response rate of 23% was achieved.

Measurement

The participants were asked to recall a recent adult education or training program they involved and to indicate the effectiveness of different power and influence behaviors. The power and influence behaviors were measured in seven constructs: *Reasoning* (with 5 items and reliability coefficient alpha of .81), *Consulting* (4 items and alpha = .82), *Appealing* (5 items and alpha = .73), *Networking* (4 items and alpha = .74), *Bargaining* (4 items and alpha = .78), *Pressuring* (5 items and alpha = .63), and *Counteracting* (4 items and alpha = .68). Two organizational contextual variables were also assessed: planner's *Conflicting Interests* (5 items and alpha = .76) and *Power Base* (3 items and alpha = .81). Here the *Power Base* was defined and measured according to French and Raven's (1959) conceptualization of five interpersonal bases of power: legitimate, reward, coercive, expert, and referent. The *Conflicting Interests* was measured as the planner's perception of the degree of conflicting between the planner and one of the most interacted person with regard to the program.

Several demographic variables were also included in the study, including age, gender, years working as an education or training professional, years working in the current organization and years working in the current position in the organization.

Data Analysis

The data analysis was performed in accordance with research questions. First, to identify the power and influence styles the data were submitted to the SPSS cluster analysis procedure based on seven attribute variables (power and influence behaviors measured on seven dimensions in the POINTS). The seven attribute variables were standardized and the cluster analysis was implemented based on z-scores. Second, means of two political contextual variables (i.e., *Power Base* and *Conflicting*) were calculated for each type of program planner based on the cluster solution in the previous stage.

Findings and Conclusions

Numerous cluster solutions (different cluster methods provided by SPSS with 3, 4, 5 and 6 cluster solutions) were requested and examined. Considerations in selecting a final solution were given to statistical properties and the classifications revealed in the literature. Ultimately, a four-cluster solution was selected as it suggested most interpretable results and similar pattern discovered by Kipnis and Shmidt (1988). These four clusters were named *Bystander* (N = 18), *Tactician* (N = 72), *Ingratiator* (N = 82), and *Shotgun* (N=54) respectively. Figure1 illustrates how planners in each of these four clusters scored in their use of seven power and influence tactics. Figure 1 is based on computations of planning behaviors' corresponding z-score.

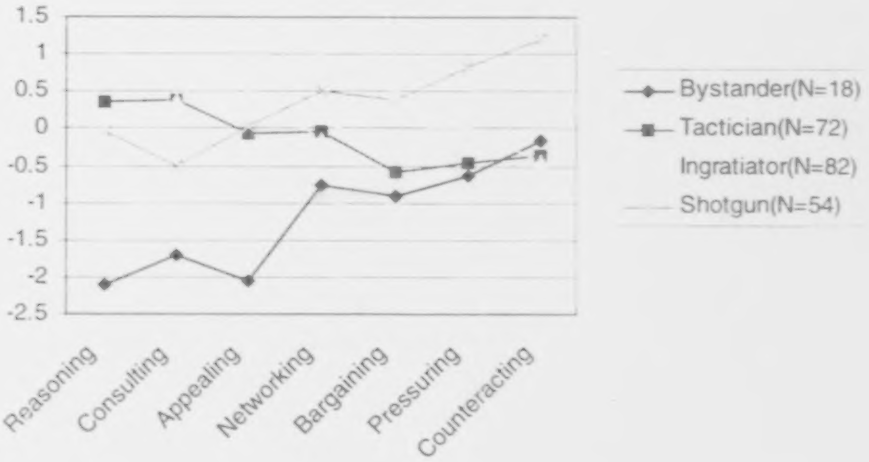

Figure 1. Use of power and influence tactics by four types of program planners.

The patterns of power and influence styles were similar to those revealed in the previous study (Kipnis & Schmidt,1988). Cluster one corresponded to the previously identified *Bystander* style. These program planners had very low scores, compared with other groups, on most power and influence tactics except *Counteracting*. Their scores on the tactics of *Counteracting* were about average. So the *Bystanders* were very passive in the organizational political process while they might occasionally counteract the actions of others. They had extreme low scores on some rational strategies such as *Reasoning*, *Consulting* and *Appealing* (two SDs below the means), suggesting that the rational strategies were really not the options for them.

Cluster two was named as *Tactician*. This group of the influencers scored high on two rational strategies (*Reasoning* and *Consulting*) and had average scores on the other power strategies. They had relative low score on

Bargaining tactics. Consequently, the power and influence style of this group suggested that *Tacticians* might have clear objectives to achieve and therefore they viewed rational strategies more effective.

Cluster three corresponded to *Ingratiator*. This group of the planners scored high on *Appealing* and *Bargaining* and had average scores on the remaining influence tactics. *Ingratiator* viewed friendly and interpersonal strategies as effective means in the interaction with others.

Cluster four planners scored high on four competitive tactics (*Networking*, *Bargaining*, *Pressuring*, and *Counteracting*), particularly on *Pressuring* and *Counteracting*. They had average scores on three accommodating tactics (*Reasoning*, *Consulting* and *Appealing*). The power and influence style of this cluster showed a nonjudicious use of offensive strategies. Thus this cluster was named as *Shotgun*.

Overall, the pattern of power and influence styles identified in this study was similar to that revealed by Kipnis et al. (1988). Consequently, the classification of power and influence styles identified by Kipnis et al. (1988) has been confirmed. It was then concluded that at least four power and influence styles could be recognized from the planners of educational and training programs.

The relationship between power and influence styles and the political contexts was examined by plotting the scores on *Power Base* and *Conflict* for each of the clusters revealed in the cluster analysis. Figure 2 presents this relationship by showing the standardized scores for each of the clusters. The means of power based and conflict for the four clusters of planners suggested they faced different political contexts. *Bystanders* had moderate power base but scored highest on conflict. Their scores on seven power and influence tactics showed that they did not want to be players in the organizational politics. Although this group of the planners had moderate power base, they were escaping from the organizational politics probably due to the situation of high conflict. Tacticians had relative lower power base and perceived moderate high conflict. This finding confirmed Kipnis and Schmidt's (1980) that tactician's power base resided in their performance of nonroutine work. The most viable strategy for them was to use rational tactics to justify their work and consequently to gain the influence. *Ingratiators* possessed highest power base but faced lowest conflict. This fact explained why they did not view two combative tactics (i.e., *Pressuring* and *Counteracting*) as effective ones. This finding also confirmed Yukl et al.'s notion that today's leader had to use a variety of appealing strategies to get the job done. Finally, *Shotguns* had relative low power base and perceived quite high conflict in the planing situation. This group of the planners were relative aggressive probably due the planning situation they faced. They had to be active politics players in order to protect their perceived interests and gain certain power.

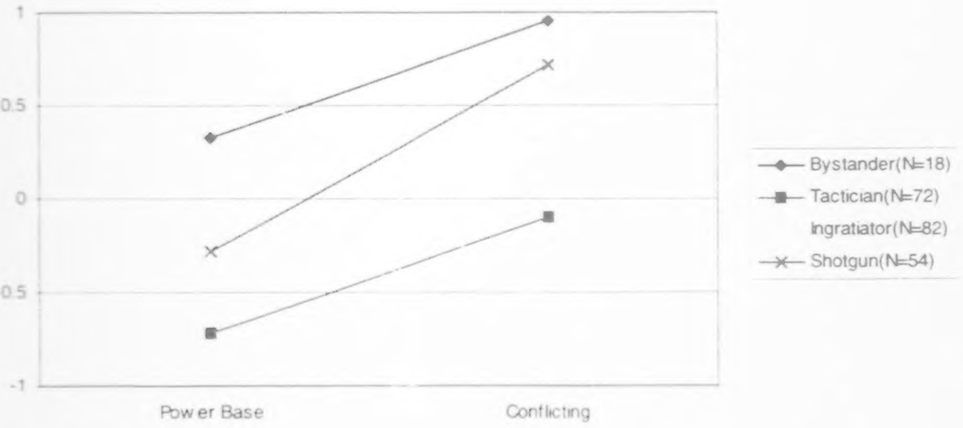

Figure 2. Relationship between power and influence styles and the political contexts

In order to find the relationship between power and influence style and personal characteristics, these measured demographic variables were examined across four clusters of planners and appropriate tests (χ^2 or F) were conducted. As it was shown in Table 1, no significant differences was found among four clusters of program planners in terms of the percent of female, years of educational experiences, years in the organization, and years in the current position. In other words, power and influence style is not found to significantly relate to the program planners' gender, years of educational experiences, years in the organization, and years in the current position. Major demographic variables have not been found to impact planners' choice of influence strategy.

Table 1
Personal characteristics of four Clusters of Program Planners

Characteristics	Bystander	Tactician	Ingratiator	Shotgun	Test of Difference
Percent of female	14.4%	37.4%	23.7%	24.5%	$\chi^2(3) = 2.5$(n.s.)
Age	48.30	46.17	45.28	46.35	F = .60 (n.s.)
Years of Educational Experience	17.25	16.40	16.68	16.34	F = .28 (n.s.)
Years in the Organization	9.17	8.06	9.49	9.20	F = .74 (n.s.)
Years in the Current Position	5.69	4.51	5.72	5.55	F = 1.21 (n.s.)

Implications

This study confirms previous research findings that at least four distinct power and influence styles can be identified from organizational political process. It revealed that power and influence styles significantly relate to organizational contexts. It also suggests that planners' personal characteristics such as age, gender and years of working experience do not have significant impacts on their choice of influence styles. This study has both theoretical and practical implications.

The process of designing and planning educational and training programs has long been conceptualized as a technical process while politics has been viewed as noise. This notion implies that program planners should avoid politics and focus on some technical areas such as needs assessment and evaluation. Recent proposed theory of program planning challenges such notion and posits that educators should pay attention to organizational politics (Cervero & Wilson, 1994, 1996). This empirical study supports the recent theorization of program planning and confirms that planning behaviors have significant relationship with organizational contextual variables. Specifically, planners' power base and perceived conflict are the determinants of their interpersonal influence tactics in the program planning practice. Consequently, effective educators should be aware of the organizational politics. Adequate theory and model for designing and planning programs should take into account of organizational politics. More research and theorization are needed to investigate different impacts of politics and planners' strategies on the program outcomes. This study makes a contribution to the literature by identifying meaningful classification of program planners based on power and influence tactics. The classification of program planners revealed in this study provides a parsimonious framework for understanding different tyles of program planners.

Although the classification of power and influence styles in this study has been found to be consistent with previous classification in the literature, some findings of this study remain uncertainty. The results of this study suggested there was no significant relationship between power and influence styles and personal charateristics such as gender. Literature has revealed mixed findings about this relationship. Drory and Beaty (1991) reported that males and females had different perceptions about power and influence tactics. It was discovered that males were more tolerant of political behavior than females and that both men and women view political manipulations of their own sex more favorably than those of the opposite sex. However Vecchio and Sussmann (1991) reported that there was no gender differences in their exercise of power except that female managers preferred to use coalition formation. More studies are needed to examine the impacts of personal characteristics on the exercise of power and influence.

This classification also provides a useful analytical tool for the practitioners to examine their own planning practice. For example, *Bystanders* had low scores on most of the influence behaviors. Although this group of the planners had moderate power base, they were escaping from the organizational politics probably due to the situation of high conflicting. This group of the planners might want to reflect their practice and consider other effective influence behaviors to get the job done. They had very low scores on three rational strategies (*Reasoning*, *Consulting* and *Appealing*) and scored average on *Counteracting*. It therfore can be reasoned that their power and influence tactics were not effective. They should consider using these rational strategies and make their political actions more constructive and effective.

Shotgun individuals faced the similar political situation as the *Bystanders* as they had moderate power base but encountered relative high conflict. Instead of avoiding conflict and escaping from the politics, as what *Bystanders* did, *Shotgun* planners favored these hostile strategies such as *Pressuring* and *Counteracting*. It would be difficult to assess the effectiveness of these power and influence tactics, but it can be reasoned that these tactics were not constructive for the educational and training program itself. Maybe the *Shotgun* planers had been pushed to act in this way by the organizational politics. *Shotgun* individuals should be aware of the destructive nature of their actions. This group of planners definitely needs to constantly evaluate their planning strategies and do not rely on some of the destructive interpersonal influences.

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Gender Consciousness Development: A Critical Literature Review

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A critical review of the literature was conducted to understand the empirical and theoretical underpinnings of gender consciousness development in work context. Key themes in the literature related to the development of gender awareness include identity, social context, and the learning process. There is not a cohesive body of literature on gender consciousness development and we conclude that more research is needed in this area.

Keywords: Gender Consciousness Development, Women's Career Development, Learning

Research on career women has shown that some women exhibit low levels of gender awareness when reflecting on their career experiences (Bierema, 1994, 1996, 1999; Caffarella, Clark, and Ingram, 1997). Women in these studies report experiencing gender based hardship, discrimination, and harassment. Yet, often these women do not attribute their experience to gender, even when asked directly. Further, these women generally do not view themselves as feminists, some almost blanching at the word. Rather, they break through the glass ceiling by "playing by the rules," ignoring sexual harassment, tolerating exclusion from the men's network, and accepting less qualified men being promoted over them. Moreover, some of these women continue to follow a non-critical stance toward the patriarchal organization *after* achieving power and success.

There is a need to explore how knowledge is created about gender in the workplace, particularly as the numbers of women in positions of power increases. Marshall's (1995) critical review of research on gender and management concluded that although wide-ranging, gender management is not a particularly coherent field. Reasons for this include the complexity of researching gender, and the assumptions surrounding gender issues. Marshall also contends that gender research is marginalized and unacknowledged in mainstream theorizing. Greenglass & Marshall (1993) observe that literature on women managers in psychology has been relatively absent, and attribute this deficiency to a predominance of positivist research in psychology at the expense of methods that would provide better insight to women managers in context such as qualitative, interpretive approaches.

The unexamined assumptions that contribute to the dynamics of society also complicate an understanding of gender in the workplace. Wellington (1996) in a speech to the Economic Club of Detroit explains, "Let me be clear, I believe that most obstacles to women's advancement to the top are not intentional, they are the result of unexamined assumptions about women's career interests and of policies and practices that have existed unquestioned over time in the corporate culture. With real commitment to change, the situation is remediable" (p.149). Meyerson and Fletcher (2000) argue that gender discrimination is embedded so deeply in organizational life that it is barely discernable to men and women. They note that, "gender inequity is rooted in our cultural patterns and therefore in our organizational systems" (p. 131). These unexamined assumptions make gender consciousness difficult to study, as it is not something that is thought of on a daily basis.

There are many calls for research on women in work context, but few published studies. MacRae advocates for more research on women's identity. She suggests that women's identity has been conceptualized in terms of formal roles in the paid work arena dominated by male experience. Women's informal roles in the realm of female experience, such as relationships and caregiving, have been ignored. Caffarella & Olson (1993) call for more data-based studies to develop the ideas, concepts, models, and theories about women's development. They ask: "How would raising the consciousness of women about the 'glass ceiling' for women in organizations affect their life dreams and what they believe they can achieve?" (p.145). Marshall (1995) writes, "I think it is a significant theoretical and practical imperative to heighten awareness about, and challenge, processes which limit the scope of the gender and management field" (p. S54). Finally, Greenglass and Marshall (1993) suggest what is needed is "more study of the gender-related processes that affect management recruitment and operation. . . . We also need more complex models of social and organisational change processes to inform this field of study [women in management]" (p.287).

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The purpose of this inquiry is to critically review literature related to the process of women's development of gender consciousness in work context. The theoretical frames underlying this study fall into two main areas: Women's career development and learning. Though interest has increased in women's development and learning within the fields of adult learning and human resource development, there has been no published attempt to synthesize the research that exists concerning women's consciousness development in the work setting. Our goals are to present an in-depth description of this literature, identify common themes, and suggest implications for human resource development.

Research Design

We conducted a critical review of the literature to understand the theoretical and empirical aspects of gender consciousness development. As suggested by Daloz (1986), Hayes (1989), Merriam & Caffarella (1991), and Caffarella & Olson (1993), a number of development paradigms are necessary when thinking about adults as learners. In this vein, we explored a variety of literatures including: adult education, sociology, women's studies, management, human resource development, psychology and career development. We searched for published research on such key words as: gender consciousness, gender awareness, feminist consciousness raising, women's development, gender and management, and women's learning and development. After reviewing the articles, we thematically organized the literature.

To begin the review, a clear definition of gender was necessary. The term 'gender' in the past has primarily referred to the social expectations and roles attributed to or experienced by people based on their biological sex (Marshall, 1995). The term today, however, has taken on a much broader and more diffuse set of meanings. Marshall argues, "It has become a general label for talking about women, men, the relationships between them, related aspects of organizing, processes through which gender differentiated behaviour patterns are enacted and associated issues of power in various guises" (p. S53). In synthesizing the literature on gender consciousness, we focus on the relational process between women and men. Our interest is in how people create knowledge about this process in the work context.

We bring to this study the assumption that both knowledge creation and gender consciousness are mulitlayered, multifaceted processes. Giesbrecht (1998) notes that the "sense of identity is multi-faceted and encompasses both a personal self-worth component and a 'self in social relationship' component" (p.476). Kegan (1994) suggests that the conditions in the world combine with the developmental forces in the individual to provide the backdrop upon which meaning-making occurs. Merriam and Caffarella's (1993, 1999) tripartite framework of adult learning suggests that adult learning occurs on three levels: the learner, the context and the learning process. This framework provides a natural bridge to viewing the literature in this manner, hence lending a systemic approach to interpreting our findings.

Findings

The literature was thematically organized around three main findings. First, identity is socially constructed. Second, the review clearly pointed out that the context where learning about gender takes place is dynamic, affected by organizational culture and policy, and influenced by discourse. Third, the learning process seems to holds particular relevance for understanding how gender consciousness is achieved. The findings are categorized under these three tracks.

Gender Awareness and Identity

Many fields, such as sociology, have broadly conceptualized self in terms of multiple identities, with individuals holding perceptions of themselves in terms of traits and values, attributes, experiences, thoughts and action, physical appearance, demographic attributes, and dispositions of various sorts (Leonard, Beauvais & Scholl, 1999). A common theme throughout the reviewed literature is that gender is socially constructed and a part of human identity development that is based on life experience. Self identity has been found to be created through participating in work, private life, community and other social entities.

In a study of women's self-identity in later life, MacRae (1995) premises her work on the assumption that to understand identity, attention must be focused on the ways in which individuals participate in the social world, the totality of their experience, and their interpretation of that experience. De los Santos' (1989) research on high-achieving, professional Mexican-American women also contributes the importance of understanding social class as an important factor shaping identity. MacRae distinguishes between social identity (others' perceptions of an individual) and "felt identity" referring to the self-meanings or perceptions. She treats felt identity synonymously with the concept of self-identity. This distinction is important when it comes to learning about gender in the workplace and understanding the diverse assumptions and perceptions at play.

Leonard, Beauvais and Scholl (1999) strongly note the "importance given to a particular role-specific identity is a function of an individual's social and emotional commitment to that role" (p. 979). Moore (1999) examined gender and occupational identities within the Israeli police force and found that women did not compromise their femininity even when their gender identity was not salient and when they worked in masculine organizations. Occupational identity appears to be more central than gender identity for both policemen and policewomen. In a study of senior management level women, Zane (1999) found that women began to place more importance on their identity as a women as their understanding of gender issues increased. Prior to gender awareness, she found that the senior women managers: (1) "believed their past success was linked to their competence and hard work;" (2) "identified with men and male-bureaucratic values such as individualism, meritocracy and equal opportunity;" and (3) "tended to avoid 'women's issues'" (p.17). Consequently, the question can be asked: What factors contribute to gender awareness being raised?

Gender Awareness and the Social World

Engagement with the social world also impacts the development of gender awareness. MacRae (1995) bases her research on women and caring on the assumption that "to understand identity, attention must be focused on the way in which individuals participate in the social world . . . the totality of their experience and, most important, their interpretation of that experience" (p.148). She explains, "a broad conceptualization of identity which encompasses more than social statuses and roles, and which focuses on experience and the individual's relationship to society, is particularly relevant to the study of the nature and basis of woman's identity" (p.148). She contends that "human action takes place within a social structural context and, therefore, humans face numerous structural constraints as they negotiate their everyday world" (p.147).

Focusing specifically on the world of work, Greenglass and Marshall (1993) argue that women as managers "cannot be fully understood outside the socio-political context within which they are found" (p. 287). Geharardi (1994) took a symbolic approach to the study of organizational cultures and views the organization as a cultural artifact. Based on over 15 years of her organizational research and consulting, she concludes that humans are more adept at doing gender than producing knowledge about gender. Her thesis is that women's presence in the workplace breaks with the symbolic order of gender based on the separation of male/female, public/private, production/reproduction. Cassell and Walsh's (1997) findings add depth to Gherardi's conclusions. They examined organizational culture and women's gender management strategies in context. They explored how women interpret organizational messages about appropriate behaviour at work, and how such interpretations affect women's everyday organizational behavior. Specific cultural expectations and rules regarding how women should behave were found, including six gender management strategies. These include: *overfunctioning* (working harder than male colleagues to achieve career success), *underfunctioning* (keeping a low profile and not publicizing career success), *flirtation, the mask* (withholding of personal information or construction an alternate image to compensate for not fitting in), *working behind the scenes* (looking after customers or things important to organization success but of little organization status), and *mothering or nurturing* (looking after male colleagues, asking about family and caring for others).

Howell, Carter and Schied (1999) explored the contradictions among critical feminist theory, HRD and reality of women's experiences in context of HRD programs in the workplace. They examined who controlled the goals, objective, and definitions of learning and work and for what purposes. In their critical ethnographic study, they found that organizations only allow positive, cheerful voices, not critical ones. HRD programs reinforce these discourses, with a tendency to be anti-feminist and anti-democratic. Feminist concept of voice were virtually absent in these corporate HRD programs. Organizational training and policy, hence, can transmits messages about how the organization regards women and how to behave in context. Peterson and Albrecht (1999) deconstructed a maternity leave policy to investigate ways gendered organizations may subtly but powerfully shape and define women's experience and ways of knowing and may reproduce hegemonic distinctions between male/female, and public/private life. They found that rather than being a benign, genderless text, HR policy—as the legally documented position of the organization—is a discursive site wherein gendered identities are produced and reproduced.

Gender Awareness and Learning

Although we have an incomplete understanding of the relationship between work, gender, and knowledge production, we conclude that gender consciousness development is achieved through the interaction of the individual in context. Developing gender awareness happens in a complex system and its aspects overlap and affect each other. Several themes emerged in the literature to describe the learning process related to gender awareness including life history and roles, relationships, otherness, and unlearning.

Life Experience and Roles Life experience and roles include, early family influence, social roles, socialization, and values. All of these interact to produce awareness about the world, including gender. Ruddick explains, "These relationships of gender are created in familial and social contexts that are marked by 'ethnicity,' 'race,' 'normative and often compulsory heterosexuality,' and economic and social 'class'—abstract labels that themselves signify emotion-laden connections and disconnections with parents, siblings, extended kin, peers, teachers, and with the 'world' in which these significant others create and are (re)created" (1996, p. 263). Ruddick (1996) further explains that knowledge is embedded in personal history and psychological life and suggests that ways of knowing arise out of "practices." Practices can be work or social roles (engineering, mothering) and through them learners acquire distinctive ways of thinking that are embedded in the practice. "It is within a practice, and in accordance with its aims, that people judge which questions are sensible, which 'methods' are suitable for addressing them, which answers are appropriate to them, and which criteria distinguish better or worse answers" (1996, p. 264). She also observes that practice-based knowing is gendered. Thus, learning about gender can occur in the practice of being a woman manager or executive. Reingold and Foust (1998), using data from the 1992 American National Election Study, created a model of feminist consciousness. Their model incorporates a variety of variables measuring ideological predisopositions in addition to variables measuring adult life circumstances and childhood and adult socialization. They conclude that women's feminist consciousness is in large part, a function of ideological predispositions—of basic sociopolitical values and beliefs. They found that neither direct personal experience with nontraditional gender roles nor exposure to nontraditional ideas and role models accounted for much variation in consciousness. This contradicts other researchers who insist that consciousness is related to viewing oneself as different from the dominant culture. Whether or not experience with gender roles has an impact is worthy of further study. In another study, De los Santos examined how 10, high-achieving, professional Mexican-American women negotiated the Mexican-American and Anglo cultures. She found that the women's early socialization determined how they experienced the dominant culture and that they used one of four patters to interact with the dominant culture including acculturation, irritation, adaptation, and rejection. Acculturators identify with the dominant society and do not shift between cultures. Irritants identify with Mexican-American values and see themselves in conflict with Anglo culture. They work within dominant culture to foster change. Adapters move between both cultures seeing them as distinct and isolated from one another. Rejectors succeed in dominant culture but reject it in favor of traditional values. Life history and roles help women create meaning about gender, and much of the meaning creation happens through their relationships.

Relationships Relationships are also instrumental in helping women achieve gender consciousness. Relationships help foster reflection, a sense of connection, and group consciousness. Daloz writes, "Emancipatory learning is not about *escape from* but rather about a deeper *immersion into* the rough-and-tumble of human relationship" (forthcoming, p.24). Gender consciousness development is also fostered through reflection, which occurred primarily through relationships in the literature reviewed. Daloz (forthcoming) points out that "for mature transformation to occur, at some point there must be conscious, critical reflection on our early assumptions about 'how life is'" (p.15). Defining and redefining identity occurs continuously and through this reflective cognitive process, individuals construct a set of personal standards (Leonard et al, 1999; Markus & Wurf, 1987). Dialogue and reflection were prevalent activities in for fostering gender awareness in the studies reviewed (Jones-Isley, 1999; MacRae, 1995; Zane, 1999).

Developing a sense of connection was important for achieving gender consciousness. MacRae (1995) found, in a study of elderly women, that the women tend to describe themselves in terms of their interpersonal relationships. Gilligan (1979) also argues that relationships and connectedness with others are of central importance to women's development and writes, "the female comes to know herself as she is known through her relationships with others" (p.437). Giesbrecht (1998) found through factor analysis that in the construction and negotiation of identity, "male perspectives emphasized instrumentality and female perspectives emphasized social connection" (p.7). Ruddick (1996) notes that the idea of a relational self or that humans are composed by the relationships in which they participate, helps explain how women become connected knowers. Humans begin learning from their earliest relationships. Ruddick writes, "This fundamental 'relationality,' as I will call it, precedes both knowing and gender. A knowing self, like other aspects of selfness, is created within relationship (p. 263). She explains further that as the knowing self is created through relationships, gender is also, simultaneously constructed. Caffarella & Olson (1993) note in their critical review of the literature on the psychosocial development of women that: "What surfaced as central to the developmental growth of women was the web of relationships and connectedness to others" (p.135).

Relationships helped women foster a sense of group awareness as Zane observes, "When women come together in groups, they are able to forge links between their own experience and that of others, especially those within their own racial and ethnic class group" (Zane, 1999, p.21). The process of becoming a feminist is regularly described by women (and men) as a process of transformation, a struggle to develop new interpretations of familiar realities (Collins, 1991). Collins (1991) notes that Black women's experiences stimulate a distinctive Black feminist consciousness. These common experiences lend to a distinctive group consciousness. The connection between experience and consciousness shapes the lives of all African-American women. Collins connects this consciousness to a self-defined collective standpoint. She notes that "a self-defined standpoint involves tapping sources of everyday, unarticulated consciousness that have traditionally been denigrated in white, male-controlled institutions" (p.26). The "interdependence of thought and action suggest that changes in thinking may be accompanied by changed actions and that altered experiences may in turn stimulate a changed consciousness" (Collins, 1991, p.28).

"Otherness" Gender consciousness depends upon understanding "otherness." Daloz (2000) describes "otherness" as a process of constructively engaging with the political and social consequences of perceiving yourself as "other" (and usually marginalized) from the dominant culture. Using Nelson Mandela as an example, Daloz describes how during his life, Mandela gradually discovered that others were quite different from himself and regarded him as inferior. He was able to achieve this understanding only after was he relatively secure in his own identity. Mandela achieved an understanding of "otherness" on his own.

Recognizing "otherness" was a collective process for the women in the literature reviewed. Zane explains her findings, "It was only after being in the system for a number of years that some of the senior women began to notice the social and professional gaps between themselves and their male counterparts" (Zane, 1999, p.17). When the conversations among senior level women managers shift from individual gender issues to a more public arena, "there is a change from an individual orientation to a group-level discourse–their discussion links them as women" (Zane, 1999, p.18). Women's networks and organizations can accelerate gender awareness and Zane (1999) work with senior level female managers who came to realize their collective experiences notes, "Through the power of 'naming' their own experiences and then collectively identifying what they saw happening for other women in the organization, the women became convinced that there were multiple standards operating, debunking the myth of an individualistic, gender-neutral meritocracy" (1999, p.18). Ruddick (1996) calls groups of knowers "epistemological communities" and explains that these communities provide knowing that is collectively produced and held. She suggests that these epistemological communities engage in "gender discourse" which dichotomizes human characteristics and associates them with masculinity or femininity. Zane concludes, "Women become more conscious of their identity as women and their connection to women's issues when they have a forum for public conversation--"naming" themselves and the obstacles they confront in the process. When women have the opportunity to share their individual organizational experiences, the collective data provide a window into the systematic patterns within the organization. Learning that other women have similar problems enables them to see the world differently, and begin to see the processes by which their identities are negated and their affiliations illegitimatized. Their conversations help them overcome internalized negative images of themselves and other women, and serve as a springboard for strategizing new approaches to action" (Zane, 1999, pp.20-21).

Unlearning A theme of *unlearning* in the literature is prevalent concerning developing gender consciousness. Marshall (1995) notes that within the feminist contributions to the field of gender and management, a major theme has been that of emerging silence. Learning to become vocal, or what Piercy (1973, cited in Marshall,

1993) has termed "unlearning to not speak," is a process of gender awareness. Jones-Isley (1999) explored personal narratives of 12 self-proclaimed feminist (11 white, 1 Mexican-American) who started a women's center in a conservative Midwest town. Through narrative analysis she found that participants hold common threads of the pedagogies experience in formal and informal settings. One of their themes was unlearning of assumptions they held about themselves and others. Zane notes a process of budding awareness and unlearning in her research and writes, "as the women began to discuss the negative ways in which they and others were being treated, they started seeing patterns which raised serious questions about fairness and equity across genders... They also began to realize that what they had always assumed to be personality conflicts between individual women and their managers or their subordinates might be reflective of more generic problems for women in the organization" (Zane, 1999 p.17-18).

Discussion

First and foremost, we heartily conclude that there is a gap in the literature on the research and theory of gender consciousness development. We searched exhaustively and found few articles on this phenomenon. The articles we found lacked a systems perspective, which we believe is crucial to understanding the process of gender consciousness development. Our reviews show the overlapping nature of the elements that contribute to gender awareness and these processes must not be considered separately. Although the articles reviewed acknowledged the process of gender awareness, they did not identify factors either contributing to or inhibiting the learning process. We believe gender awareness is a process of transformative learning that may occur individually or collectively. What is not clear, however, is what events lead to transformation in consciousness? The literature provides little information about the learner herself and only a glimpse of how life experiences prior to work impact gender consciousness. There was no information on the emotional aspect of gender consciousness. Few empirical studies of this phenomenon exist as most of the studies are qualitative case studies. We found no explanation for why some people become aware, but others do not. Finally, although people achieve gender consciousness, how they use this knowledge is not discussed in the literature (such as educating others or taking action for change). All of these gaps are fertile ground for future research.

The literature corresponds with Merriam and Caffarella's (1999) configuration of the learner, context, and process, in that each of these themes was evident in the description of gender consciousness. Context was most often discussed, and we infer that this is because social, political, and economic realties are more visible than individual learner characteristics, experiences, and processes. Understanding the learner and the process is much more complicated and few studies address these aspects. We conclude from this review that reflective practice is critical to developing gender awareness, but the process and whether or how the learning is transformative remains to be illuminated through research. We've learned much about the observable elements of gender awareness, but believe there is much more to understand beneath the surface such as assumptions about self, identity, and context.

Daloz (forthcoming) examines the nature of transformative learning that occurs as a person develops a sense of social responsibility and outlines four conditions of transformation: presence of the other, reflective discourse, a mentoring community, and opportunities for committed action." We found evidence in the literature for otherness, reflection, and a community, although not necessarily one devoted to mentoring. We did not find evidence for how women take collective action based on gender awareness, other than in the feminist consciousness raising literature. Application of this awareness in work context was not discussed in the literature. We conclude that learning about gender is an ongoing process, although we are less clear how the learning takes form. This conclusion corresponds with Gherardi's (1994) observation that "doing gender" is easier than explaining it.

Interestingly, our conclusions parallel closely Taylor's (1997) critical review of the empirical studies of transformative learning theory. Taylor's review discloses that in understanding the learning process of transformative learning, a greater degree of recognition needs to be given to "the significant influence of context, the varying nature of the catalyst of the process, the minimization of the role of critical reflection and increased role of other ways of knowing and relationships, and an overall broadening of the definitional outcome of a perspective transformation" (p.34). With a slight change in wording, his recommendations could almost fit the needs for research on gender consciousness, hence suggesting close ties between gender consciousness development and transformative learning.

We conclude that learning about gender can happen individually or collectively. There were more studies in the literature that examined gender consciousness development in groups than individually. Daloz's observation that recognizing "otherness" is pivotal to developing awareness is a very important finding. A failure to regard oneself as "other" may be one explanation for why some senior level women in management do not see the differences in gender. The climb up the corporate ladder may have left them insecure in their own identity after years of striving to conform to a male image. Future research should address how people learn to view themselves as "other" or different and how this knowledge informs their learning and action.

Finally, learning about gender often involves unlearning assumptions that women should emulate men, or that their experiences are valid. Unlearning tended to happen collectively for women in the literature which leads us to conclude that women's networks and organizations may be a significant vehicle for fostering gender awareness. Zane observes, "Affiliating as women is a contradictory notion in a male bureaucratic culture. In a male-dominated institution that promulgates individualism, merit and gender-neutrality, forming women's groups to challenge the distribution of organizational resources affronts the very assumptions on which the culture is based. The expectation is that women will act as neutered individual." (Zane, 1999, p.20).

Limitations of this Critical Review

This review has imperfections and our work is not finished. One of the limitations is that we reviewed literature from the for-profit world. There are many contexts where gender consciousness occurs, such as the public and non-profit sectors. These contexts need to be more fully investigated to understand how gender awareness occurs in them. Another limitation is that we did not find a definitive body of work related to our question, and this review is the was drawn from a number of disciplines and sources. Finally, we are both from the United States and are White, heterosexual women of privilege. Our positionality may have prevented us from seeing nuances in the literature, exploring certain search terms, and interpreting the findings to be inclusive of all women.

How this Research Contributes to New Knowledge in HRD

This critical review contributes to HRD through extending the literature on ways of knowing in work context. We attempted to take a systems approach to understanding this problem, and although the literature is not systematic, we are working to build a systems view of the development of gender consciousness. To that end, we are launching a study of this phenomenon and data collection is underway. While there is exhaustive literature on career development, far less attention has been paid to understanding the unique issues of women's career development. We have also found little literature on the learning processes related to gender consciousness development in work context and believe this research begins to address this void.

Marshall (1993) observes that gender research is marginalized. We agree and believe that not only is literature on this subject difficult to find, but also questions about gender do not often cross the radar screen of many researchers. We think more research must be done in this area and feel that this investigation validates our intention to study how gender awareness occurs among women. As Marshall advocates, researchers must ask the question: "*In what ways is gender important here?*" We believe that is a key starting point for future research in HRD. A metaphor that continually reminds us about the process of achieving gender consciousness in both life and research is that oftentimes we find ourselves in the middle of a tornado. When you are in the eye of the storm things may seem calm and inert, but in reality the world is being spun around you. Becoming aware of this reality takes openness, recognition of otherness, unlearning, and ultimately consciousness.

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White Male Backlash: Practitioner Perspectives on the Phenomenon

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White male backlash (WMB) has emerged as an American social phenomenon. Although there has been coverage of WMB in the popular press, it has not been adequately studied through empirical research. Specifically, there is a paucity of research describing WMB or identifying its impact on the contemporary workplace. A survey administered to a purposeful sample of practitioners generated quantitative and qualitative data on the phenomenon. Implications for practitioners and suggestions for further research are discussed.

Key Words: Diversity, Discrimination, Affirmative Action

A new social phenomenon has emerged in the United States (U.S.) during the 1990s involving White males who feel alienated, frustrated, and angry. The phenomenon is sometimes referred to as "White male backlash" and the individuals referred to as "worried" or "angry" White males. Although there has been coverage of the phenomenon in the popular press (Reeves, 1995; Yang, 1996), this phenomenon has not been adequately studied through empirical research. Specifically, there has not been any research describing the White male backlash (WMB) phenomenon or identifying its impact on the workplace. This was a study to generate empirical evidence on the WMB phenomenon.

Background

The U.S. has undeniably experienced substantial change during the last decade of the 20th Century. In discussing the impact of societal change on the workplace, many authors promote anticipation of rapid change as the norm (Drucker, 1989; Engels, 1995). Downsizing, increased globalization, deregulation, outsourcing, technological change, mergers, and acquisitions have created an environmental context for job transition (Gysbers, Heppner, & Johnston, 1998). Downsizing and a tendency for flatter organizations have meant there are fewer middle management positions, leaving diminished opportunities for steady career progression. The popular press has boldly proclaimed "the end of jobs" (Barnet, 1993; Bridges, 1994). Competition for the limited number of advancement opportunities has intensified (Yang, 1996). Traditional career assumptions no longer hold true (Hall, 1992). All indicators suggest that corporate restructuring and job loss are likely to continue in the near future (Eby & Buch, 1995).

Concurrently, the U.S. workplace has been affected by substantial demographic and societal shifts (Johnston & Packer, 1987). Their *Workforce 2000* study suggests that 60% of new entrants to the workplace will be minorities by the year 2000. The workforce is also growing older, with the majority of baby boomers now in middle age. Later retirement has caused career progression bottlenecks in many organizations (Leibowitz, Farren, & Kaye, 1986). Gender representation in the workplace has increased (Rifkin, 1994). The increased presence of women has marked a shift in workplace power dynamics and changed the traditional patriarchal hierarchy. There have also been changes in workplace social dynamics as increasing numbers of women and minorities have entered the workplace and advanced to mid- and senior-level management positions (Johnston & Packer, 1987). Changes in society in general, and in the workplace in particular, have caused many employees to reassess conventional workplace "rules" (Kotter, 1995).

The WMB phenomenon has emerged amidst these changes in the contemporary work environment. While societal and workplace changes have affected all individuals, they have particularly affected males (Faludi, 1999). Faludi describes the phenomenon as a "male crisis" (p. 50). Birkenstein (1999) narrows the population to White males by noting that "we have a parade of White males who appear to feel that simply being a White male should still entitle them to certain benefits…This is the true and sick sense of disenfranchisement some men feel, which we must deal with if we are to begin to understand this ongoing problem" (p. 18). Other research has shown that White

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males' commitment, self-esteem, and attachment to work has diminished as the workplace has become more diverse in terms of race and gender (Rifkin, 1994).

There is the suggestion that the WMB phenomenon has surfaced in response to Federally-mandated affirmative action (AA) programs (Faludi, 1991; Hoppe, 1996; Reeves, 1995; Yang, 1996) and formalized corporate diversity initiatives (Galen & Palmer, 1994; Rifkin, 1994; Whittenburg, 1999). The growing societal demand for "political correctness" in the workplace has been met with increased resistance. Studies on differences in the attitudes of specific demographic groups have shown White males' attitudes toward AA and diversity programs is significantly lower than that of other groups (Konrad & Linnehan, 1999; Lobel, 1999). What remains to be explored is the impact that White males' attitudes, as exemplified by WMB, is having on the workplace.

There may be other reasons for the distress experienced by White males. "[F]eelings of distress can be attributed to failures and deficiencies in coping with environmental demands as well as the experiences of personal failure and inadequacy which the individual sees as permanent. Lack of control over changes in the environment, real or fantasized dangers, humiliations, or loss of status are some examples" (Kets de Vries, 1995, p. 45). White males have counted on the traditional expectation that hard work pays off in steady career path progression, yet the danger is that career progression is no longer assured. Add to this the White males' perception that women and minorities are getting ahead due to AA programs and the situation is primed for a reaction from those White males who feel disenfranchised. Perceiving AA programs as unfair, some White males feel frustrated, alienated, and angry. "To be a White male in this organization means that I can kiss any chance of promotion good-bye," is a frequent lament, regardless of the statement's validity. Perceptions of humiliation or loss of status may follow.

Problem Statement

The general lack of empirical research on the WMB phenomenon and its impact on the workplace is problematic. Studies have shown White males' attitude toward AA programs is significantly lower than that of other demographic groups (see Bobo & Kluegel, 1993; Konrad & Linnehan, 1999). Lobel (1999) reports the same sentiments toward workplace diversity programs. What remains to be explored is the impact of White males' attitudes, as exemplified by White male backlash, on individual and organizational effectiveness. Rifkin (1994) suggests that if we do not help White males adjust to a diverse workforce, they will disengage, thereby compromising the desired benefit of diversity. Unfortunately, although anecdotal information and personal communications suggest the phenomenon is occurring and having a negative impact on individuals and work groups, there has been a paucity of empirical evidence documenting the phenomenon. Therefore, the purpose of this study was to provide empirical evidence describing WMB and its impact on the workplace in general, and on organizational effectiveness in particular.

In discussing the purpose for this study with fellow researchers, some could not see the need for studying the White male population. Their argument comes from the radical humanist paradigm focusing on the emancipation and empowerment of the alienated by raising consciousness (Burrell & Morgan, 1979). The intimation was that White males have traditionally been those with the power, so there should be no need to emancipate or empower them. Curiously, the argument was, "Why bother studying them?" This argument appears shortsighted. Although we are living in an increasingly pluralistic world, White males still account for the critical mass of the U.S. civilian labor force. It seems irresponsible to *not* learn more about the WMB phenomenon and its impact on the workplace.

Theoretical Framework

Sidanius and Pratto's (1999) social dominance theory (SDT) served as the theoretical framework for this study. SDT synthesizes political attitude and public opinion research with Adorno, Frenkel-Brunswik, Levinson, and Sanford's (1950) authoritarian personality theory, Rokeach's (1979) two-value theory of political behavior, Blumer's (1960) group positions theory, and Tajfel and Turner's (1986) social identity theory, among others. Social identity theory, in particular, provided the basis for examining the relationship between demographic group membership and values, beliefs, and experiences that effect attitude. The two constructs for this study were attitude and organizational effectiveness. The variable for attitude, the dependent variable, was the perception of the WMB phenomenon. Organizational effectiveness was a second dependent variable, identified as perception of a workplace problem connected to the WMB phenomenon. The proposition was that the WMB phenomenon is a workplace problem that detrimentally impacts organizational effectiveness.

Research Questions

The purpose of this study was to describe the WMB phenomenon and to see if there is a perceived link between the phenomenon and organizational effectiveness. This is a descriptive, exploratory study designed to provide empirical evidence on the phenomenon. The primary research question for this study was: What is WMB? Secondary research questions included: How common is this phenomenon in the U.S. workplace? How does the phenomenon play out in the workplace? Is it seen as an organizational problem? Does it impact organizational effectiveness?

Research Methods

Because of the exploratory nature and broad scope of this study, a combined qualitative and quantitative research design was used. Creswell (1994) recommends this approach as complimentary, allowing overlapping and differing facets of the phenomenon to emerge. The following sections provide information on the research setting, respondents, data collection, and data analysis.

Research Setting and Respondents

The research setting was the contemporary U.S. workplace. Although the data was generated from individual respondents, the level of analysis was the organization. A variety of public sector agencies (e.g., scientific, research, intelligence, defense) and private sector organizations (e.g., telecommunications, transportation, consulting, retail, healthcare) were included, to maximize the variation in the setting.

Firestone (1987) notes that "reality is socially constructed through individual or collective definitions of the situation" (p. 16). This antipositivist ontological perspective was appropriate for looking at the individual and collective realities of the WMB phenomenon. Reality is subjective and at the same time multiple, as experienced and seen by the individual (Creswell, 1998). This philosophical assumption had implications for the choice of study respondents. Maxwell (1996) suggests that respondents should be purposefully chosen among those who can most thoroughly inform about the issue under study and who can answer the research question. The respondents for this study were purposefully chosen using occupation as the criterion. Based on their perceived ability to answer the research questions and provide information-rich data, respondents included HR professionals, EEO and AA program officers, diversity program managers, and other related practitioners. An attempt was made to maximize the variation in race and gender of the informants.

Data Collection and Analysis

Because there was no existing instrument for examining the WMB phenomenon, a structured survey instrument was developed by the researcher. Independent variables included 'organization,' 'race,' 'gender,' and 'occupation.' These independent variables were also transformed to produce the two additional independent variables of 'White males' and 'women and minorities.' Dependent variables included two nominal response questions (Have you heard of the phenomenon of WMB occurring in the workplace in response to AA programs and diversity programs? Have you had direct workplace experience with the phenomenon?). Dependent variables also included two rated questions (Strongly disagree, Disagree, Don't know, Agree, Strongly agree response to the statements: 'WMB is a workplace problem' and 'WMB is a problem in my organization'). Qualitative data was generated from five open-ended questions. This combined quantitative and qualitative approach helped generate complimentary data, and allowed for the discovery and generation of possible hypotheses for further research.

The survey instruments were administered through e-mail and face-to-face to 76 contacts. The contacts were encouraged to forward the survey instrument to others who met the occupational criterion for respondents, helping to maximize the collection of data. The survey instrument informed respondents of the intended use of the data and the value of their participation in the study, along with assurances for the confidentiality of the informants and their employers. Computer-based statistical software yielded frequencies and crosstabulations for the key variables. Data analysis also included reviewing the qualitative data provided by the completed open-ended questions to generate themes in the findings and assertions.

Findings

There were 45 usable responses, with 26 (57.8%) received through e-mail, two (4.4%) through U.S. Postal Service, and 17 (37.8%) through face-to-face contact. Eighteen (40.0%) were from private sector organizations. Twenty-seven (60.0%) were from public sector agencies. Nearly all the organizations were large (i.e., greater than 1,000 employees). Gender demographics included 21 (46.7%) males and 24 (53.3%) females. Because of the assumed connection between WMB, EEO legislation, and Federally-mandated AA programs, the survey used legally-defined terminology for race. Respondents included 25 (55.6%) White, 17 (37.8%) Black/African American, two (4.4%) Hispanic, and one (2.2%) "other" who self-identified as minority. Twenty-five (55.6%) were human resource professionals, including human resource management and human resource development functional specialists. Respondents also included five (11.1%) EEO and AA officers, seven (15.6%) diversity program managers, and eight (17.7%) "other" practitioner occupations (e.g., mentoring program manager, internal OD consultant).

Variable factor	Had heard about WMB	Had direct experience with WMB	Agreed/ strongly agreed WMB is a workplace problem	Agreed/ strongly agreed WMB is a problem in their organization
Private sector	61.1%	22.2%	22.2%	5.6%
Public sector	74.1	48.1	51.8	40.7
White	68.0	36.0	40.0	32.0
Black/African American	70.6	41.2	41.2	17.7
Hispanic	50.0	0.0	0.0	0.0
Male	71.4	33.3	33.3	23.8
Female	66.7	41.7	45.8	29.1
White males	69.2	30.8	38.5	23.1
Women and minorities	68.8	40.6	40.7	28.2
HR professionals	64.0	24.0	32.0	16.0
EEO/AE officers	60.0	40.0	40.0	20.0
Diversity program managers	85.7	85.7	71.5	71.5
All respondents	68.9	37.8	40.0	26.7

Table 1. Summary of crosstabulation for key variables.

Table 1 provides a summary of the crosstabulation results by variable factor. For example, 61.1% of the private sector respondents had heard about WMB, versus 74.1% of the public sector respondents. Nearly 70% of all respondents had heard about WMB. Thirty (66.7%) respondents provided a comment defining WMB. Twenty-nine (64.4%) respondents provided a comment on the workplace impact of WMB. Eighteen (40.0%) respondents provided a comment describing their personal experience with the WMB phenomenon. Eighteen (40.0%) respondents agreed with the statement 'White male backlash is a workplace problem.' Six (13.3%) disagreed. Twenty-one (46.6%) did not know or did not respond. Thirty-seven (82.2%) respondents provided a comment about their response to this question. Twelve (26.7%) respondents agreed with the statement 'White male backlash is a problem in my organization.' Eighteen (40.0%) disagreed. Fifteen (33.4%) did not know or did not respond. Thirty-four (75.6%) respondents provided a comment about their response to this question.

Discussion

The descriptive respondent comments confirmed that WMB is the manifestation of some White males' reaction (i.e., attitude) toward factors that are upsetting the traditional social dominance of White males. The factors that are changing the taken for granted social hierarchy and power structure are varied. The three factors cited most consistently by respondents were Federal equal opportunity legislation, Federally-mandated AA efforts, and workplace diversity programs. Other factors cited by the participants included the changing workforce demographics (e.g., more women and minorities in the workplace), the need for continuous learning and skill development, and changing organizational structures (e.g., downsized, flatter, limited headroom, increased competition for jobs).

Bobo and Kluegel (1993) identify self-interest, stratification ideology, and racial attitudes as three factors that generate opposition to race targeting (e.g., AA programs). Self-interest may be the more substantial motivator for a negative reaction against programs that are perceived as "not for me" (Sears & Funk, 1990). The WMB phenomenon appears to be an issue more of self-interest, rather than stratification ideology or racism. Konrad & Linnehan (1999) suggest that "it is easier in contemporary society to develop socially acceptable arguments for opposition to a specific government policy than to justify racist sentiments" (p. 448). At the same time, the data from this study show that White males who oppose government-promoted AA and diversity programs are not necessarily perceived as racist even if they are seen as harbingers of WMB. Not all White males are racists. Not all White males exhibit WMB. Not all White males who demonstrate WMB are racist.

"When a man does not understand a thing, he feels discord with himself: he seeks causes for his dissonance not in himself, but outside himself, and the result is war with something he does not understand" (Chekhov, 1973, p. 278). WMB is a symptom of this war. The data show that WMB is evidence of some White males' reaction to societal and workplace change, and that the reaction is largely negative. Examples of the White males' dissonance include the perception that "the system" is unfair, the perception that promotions and other employment opportunities given to women and minorities are not tied to merit or performance, the unspoken upheaval in the White males' traditional sense of entitlement, and their desire for a return to "the way things used to be." The ontological assumption is that White males who exhibit WMB appear to be constructing their own reality based on their perception that women and minorities are getting an unfair advantage in employment opportunities, resulting in a loss of employment opportunities for White males. This is the White males' perception, even though the data from respondents indicate the White males' perception is largely inaccurate.

Both qualitative and quantitative data show that WMB is known as an issue in the contemporary workplace and is perceived as an organizational problem. There appears to be a considerable sense that the phenomenon is having a negative impact on the workplace, with 40% of respondents saying it is a workplace problem and nearly 27% saying it is a problem in their organization. On the other hand, description of what WMB looks like and its impact on the workplace varies widely from inactive expressions of negative attitude (e.g., 'griping,' resentment, apathy) to active behaviors (e.g., creating conflict in work relationships, detrimentally effecting organizational mission accomplishment, outright hostility, sabotage). In many instances, respondents identified that WMB is detrimental to organizational effectiveness. Respondents cited examples of underground newsletters, e-mail discussion groups, and anonymous letters generated by angry White males. In all instances, the impact of the phenomenon was described as negative, draining energies away from effectively accomplishing the organizational mission.

Although the WMB phenomenon is evident in both private and public sector organizations, it is more readily perceived in the public sector. The data suggests that this may be due to several factors. Namely, employment in the private sector is seen as more competitive based on merit, as compared to race or gender. Some respondents explained that workforce demographics, promotion information, and controversial issues are generally not discussed openly in the private sector workplace. Also, although the number of private sector organizations with diversity programs is growing, many do not have internal EEO officers and only those organizations with a government contract are required to have an AA program. Conversely, all public sector organizations have EEO and AA programs and program staffs. They also are more likely to have formalized diversity programs due to the Presidential management directive on diversity. Demographic and promotion information is readily available in public sector organizations, supporting more open discussion and debate.

Although both male and female respondents saw the phenomenon as a workplace problem, it was more readily perceived as a problem by females. Interestingly, compared to Black/African American respondents, more White respondents saw WMB as a problem in their organization though White respondents had nominally less direct experience with WMB. Also, the responses of White male respondents as a population subgroup were not substantially different from the responses of the population subgroup of women and minority respondents.

Diversity program managers were more likely than EEO/AE officers to have heard about WMB, had direct experience with WMB, agreed that WMB is a workplace problem, and agreed that WMB is a problem in their organization. In turn, EEO/AE officers were more likely than HR professionals to have heard about WMB, had direct experience with WMB, agreed that WMB is a workplace problem, and agreed that WMB is a problem in their organization. As a population, diversity program managers also completed more open-ended survey questions and tended to be more descriptive in their comments. The differences in perceptions of these occupational groups may be due to their functional or program mission. Diversity program managers are charged with addressing broad issues affecting employee morale, whereas the focus of EEO and AA officers is largely limited to policy development, complaint processing, and special emphasis programming for underrepresented groups (i.e., women and minorities rather than White males). The focus of HR professionals is generally limited to their functional specialty (e.g., staffing, compensation, training) and have a macro focus on the organization, rather than a micro focus on the needs of specific employee populations (e.g., White males).

A number of respondent comments seemed especially peculiar, given who the specific respondents were and where they work. One example was the way in which some private sector HR professionals vociferously denied that WMB is an issue in their organization because due to sound HR practices which do not allow WMB to occur. The intimation was that having policies, procedures, and practices in place would eliminate any negative reaction to employment decisions. Another peculiar response came from the White female who responded that WMB is a hoax perpetrated by White males and not a real problem in corporate America. Yet another strange response came from a public sector White male who stated that he had not heard of WMB. What is peculiar is that he works in an EEO office that co-sponsored an agencywide White Male Issue Study Group that identified WMB as a major organizational issue. The respondent's comment may indicate he is out of touch with what is going on in his office and organization. On the other hand, it may be based on other factors such as denial or fear of reprisal.

Follow-up personal communications with another respondent from the same public sector agency, showed that the White Male Issue Study Group's internal 'administrative use only' report concluded that:

> "[T]he agency's White male problem includes White male backlash. We believe there are a small but significant number of White male employees who are extraordinarily angry.... The negative impact of this anger on the productivity of these men and the people around them is, in the group's view, substantial. But the problem goes far beyond backlash. We believe there are much larger numbers of White males who ... are to one degree or another disaffected, disillusioned, disheartened and confused. This is a far more subtle problem, and yet in our view the cumulative energy diverted by the issue from accomplishing the mission of the organization is considerable."

A number of respondents commented about WMB under present environmental conditions (e.g., economic prosperity, organizational growth) versus in the future. While WMB was not currently perceived as a problem in their organization, the implication was that continued changes in workforce demographics and recessionary economic times would force the issue into the limelight.

Conclusions

This study attempted to describe the issue of the WMB phenomenon and its impact on the contemporary workplace. It in no way suggests that the WMB phenomenon should displace other issues of race and gender already evident in research and practice—chiefly, the history of discrimination against women and minorities. The data suggest, however, that White males are just as susceptible to self-interest perceptions of inequity and discrimination, and that their perceptions can be manifest in negative attitude and behaviors, such as WMB, that are detrimental to organizational effectiveness. White males remain the largest percentage of the American workforce. In large part, they also continue to hold positions of power and influence. The results of this exploratory study provide an imperative for understanding and addressing the WMB phenomenon, not only due to its own merits, but also because of its interdependence with the ultimate resolution of many other race and gender issues.

Contribution to New Knowledge

The results of this study provide data to describe and enhance understanding of the White male backlash phenomenon. Understanding the WMB phenomenon is important for both theoretical and practical reasons. For theory, this study provides empirical research on the WMB phenomenon. Konrad and Spitz (1999) suggest that "it is important to move beyond the treatment of demographics as either proxies for theoretical constructs or sources of error variance that must be controlled....[R]esearch must identify the theoretical reasons why demographic groups are expected to differ and incorporate measures of the relevant theoretical constructs" (p. 4). In this regard, this research contributed to social dominance theory and, in particular, social identity theory.

For practice, the results of this study are useful for HR practitioners who must address the collective and individual needs of employees, including White males. Engels (1995) calls out the need for the "identification of general and specific implications for theory and practice working with humans of all ages and stages of career development, especially in terms of preventive strategies" (p. 84). Lack of career development appears to be a significant factor in WMB. Where White males who feel disenfranchised exhibit symptoms of WMB, HR practitioners must develop strategies for ensuring that any dysfunctional aspects of the phenomenon are minimized. "As Americans deal with the reality of the shortened corporate ladder and organizations grapple with ethical and logistical issues in downsizing, the identification of factors that foster career growth ... are critical for individual and organizational survival" (Eby & Buch, 1995, p. 41). In theses times of rapid change, promoting career growth is as crucial for organizations, as it is for individuals (Engels, 1995). Also, the results of this study provide insights to supervisors who have to select for limited advancement opportunities, who are charged with creating other developmental opportunities, and who have the most direct opportunity to positively influence White males who are evidencing WMB.

Limitations and Future Research

This was an exploratory study about a social phenomenon, not a study about the experiences of White males. It was a preliminary sensing study examining the practitioners' concept of the WMB phenomenon and identifying their direct experience with it. It was limited by sampling methods. Respondents were purposely chosen using an occupational criterion (e.g., HR professionals, EEO and AA officers, diversity program managers), thereby limiting the generalizability of the findings. The assumption was the respondents would be informed enough to answer the research question. On the other hand, given their occupation, it could be seen as their self-interest to identify the WMB phenomenon as a problem. This study was also limited by the data shared by the informants based on their occupation, rather than their race or gender. The data, then, reflects perceptions of "others" about the WMB phenomenon.

The study was also limited by data collection methods. E-mail and face-to-face data collection methods may have influenced responses in that some respondents may have had concerns over confidentiality, attribution, and potential for reprisal. E-mail data collection was also limited in that there was no mechanism for verification of demographic information (e.g., race, gender). Also, information on the validity and reliability of the data collection survey instrument completed by the respondents was not available.

Although the data from this pilot effort does have limited generalizability, a more comprehensive effort with a larger sample size and greater statistical rigor is warranted. A larger sample size would improve the results in future research on the WMB phenomenon. Efforts should be made to ensure that the sample is representative of all demographic groups (e.g., Asian/Pacific Islanders, Native Americans), given that research has shown that demographic groups differ in their perceptions of EEO, AA, and other equity issues (see Bobo & Kluegel, 1993; Konrad & Linnehan, 1999; Steeh & Krysan, 1996). A survey instrument with more substantial quantitative questions could examine the forms WMB takes (i.e., how it is manifest, observed), perceptions versus actual experiences or behaviors, complaint activity or other outcomes as a result of WMB, and other relevant aspects. Statistical evidence on the relationship between WMB and self-interest, stratification ideology, and racial attitudes would be helpful. Lastly, what remains to be directly explored are the perceptions of the general population of White males about and experiences with the WMB phenomenon.

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Should We Define the Profession of HRD? Views of Leading Scholars

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Much scholarly discussion has been devoted to definitional issues in HRD. This dialogue has primarily focused on competing definitions, while comparatively little has explored the issue of definition in and of itself. This paper explores whether HRD should be defined and why, which was one theme that emerged from a qualitative study of beliefs of leading HRD scholars.

Keywords: Defining HRD, Professionalization, Qualitative

In 1992 Chalofsky asserted that Human Resource Development (HRD) is "a field in search of itself". Is this true? HRD has made great strides in establishing itself in organizations and beginning to construct a knowledgebase to guide its practice, however it is also clear that much scholarly discussion during the last 10 years has been devoted to definitional or foundational issues such as the purpose of HRD. Recent literature reviews conducted by Ruona & Swanson (1998) and Weinberger (1998) uncovered 20+ different definitions of HRD. These definitions have been offered by some of HRD's top scholars. In one respect, these varied definitions are useful because they foster introspection about issues related to each definition such as the purpose of HRD, for whom HRD does its work, and HRD's primary activities. On the other hand, evident in these various definitions (and the debates that they instill) is also a fragmentation that some in the field fear could threaten HRD's contributions and, ultimately, its sustainability. The current state of the field would seem to find that these issues of definition unnecessarily dominate discussion and supports Chalofsky's 1992 assertion that HRD is "still looking for a unifying base to rally around" (p. 176).

However, the question remains—is HRD in search of itself? Are we looking for a unifying base around which to rally? Should we be? Thus far, the dialogue around definitions has primarily focused on competing definitions and debating which definition is more "right". Comparatively little dialogue has explored the issue of definition in and of itself and probed whether the profession should be bound in some way and how that might look. It could be that much of the debate around definitions is actually rooted in very different ideas about the act of defining/bounding the field. Uncovering some of these deeply held assumptions may help HRD to be more clear about its future development.

Purpose

In a recent study exploring beliefs underlying HRD through the views of scholarly leaders in the field (Ruona, 1999), there was much discussion about this topic—whether HRD should strive for definition, why or why not, and what it might look like if the field pursues increased definition and bounding. The purpose of this paper is to share one theme that emerged from the analysis of that larger study.

To provide some background, the purpose of the overall study was to explore beliefs underlying the profession of HRD. In order to do this, the inquiry explored assumptions and beliefs of scholarly leaders in the field. Specific objectives of that study were to:

1. Explore core beliefs that are underlying participant's ideas of excellencies to be produced by the profession;
2. Analyze the findings to identify common and divergent beliefs across participants of this study.

The findings presented, once again, represent only one part of the study's findings which were quite extensive. The focus of what will be reported is limited to the issue of defining and bounding the field which was a naturally emerging theme from that qualitative data.

Methodology

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This was a descriptive study, using qualitative methods. Initial in-depth, face-to-face, interviews were conducted with 9 of the 10 participants, and one was a phone interview. Each participant was provided with a worksheet to prompt their thinking which simply stated the following organizing question: "If the profession of HRD was excellent in all ways, what 5-7 things would be true?" Participants were directed to use this question as a springboard to spur conversation during the interviews and were instructed that the focus of the interview would not be on their list of excellencies, but rather on the assumptions and beliefs driving those ideas of excellencies. These initial interviews were unstructured rather than imposing too much structure that may have impeded discussion of the topics raised by the participants.

All interviews were approximately two hours long and were audio-taped. Interviews were transcribed professionally, and were carefully verified by the researcher. In addition, member checks (Guba & Lincoln, 1989) were conducted with each of the 10 participants to ensure accurate interpretation and to discuss follow-up questions. These were tape-recorded phone conversations that were then partially transcribed by the researcher.

Sample

Qualitative inquiry focuses on in-depth, small, information-rich cases selected purposefully. It was estimated that members of the scholarly community might be well-suited for participation in this study because of (a) their intense and scholarly interest in HRD and (b) the likelihood that this would be a pool of people who are quite familiar with a diverse range of issues facing the field, and have done some serious thinking on issues related to HRD. All participants were then chosen on the basis that they have served a leadership role in a scholarly association related to HRD. That is, each participant has been either: (a) an incoming, current, or past president of the Academy of Human Resource Development (AHRD), or (b) a current or past chair of the American Society for Training and Development's (ASTD) Research Committee. This sampling criteria was chosen because (a) these two associations represent the two primary scholarly associations of the field, (b) leaders of these associations are elected by their membership, (c) these are active scholars who have made marked contributions to the field of HRD. The current and previous four leaders from each of the associations were solicited for this study, and are listed in Table 1. All participants solicited agreed to participate in the study, and agreed for their names to be published. However, quotes/excerpts are *not* accompanied with a name, and information that might make it possible to identify the participant has been edited out of any published documents.

Table 1. Scholarly Leaders Participating in the Study.

AHRD Presidents	ASTD Research Committee Chairs
Gary N. McLean (president-elect)	Victoria J. Marsick (1997-current)
Elwood F. Holton (1998-2000)	Darlene Russ-Eft (1994-1996)
Richard A. Swanson (1996-1998)	Ronald L. Jacobs (1991-1993)
Karen E. Watkins (1994-1996)	Timothy Baldwin (1991)
R. Wayne Pace (1993-1994)	Neal Chalofsky (1989-1990)

Analysis

Qualitative data analysis demands inductive reasoning with the purpose of searching for important meanings and patterns in what the researcher has heard and seen. The process used to analyze the data for this paper was based on the constant comparative method (Maykut and Morehouse, 1994) and generic coding procedures. An overview of the process, which was more recursive that can be described here, is summarized in Table 2.

Findings: Defining and Bounding the HRD Profession

The goal of this section is to provide a creative, descriptive, and interpretive account for this theme entitled "Defining and Bounding the HRD Profession". The focus is on reporting the sub-themes that emerged, with a heavy emphasis on hearing the voices of the participants of the study through excerpted quotes from the interview transcripts. Excerpts from actual interviews are separated from the text and are bulleted by a double-quote (") and italicized. For example:

> " *This is the format of a quote that is excerpted directly from the text of a participant's interview. It is indented, bulleted by a double-quote mark, and italicized.*

Table 2. Overview of Data Analysis.

Phase I	1. Transcripts read and meaningful segments of the text highlighted and segmented. 2. Interview text formatted for sorting and coding (described below). 3. Three interviews analyzed in-depth. 4. First coding scheme developed and applied to first three interviews. 5. Peer Review #1.
Phase II	6. Remaining seven interviews coded. Coding scheme evolved, and interviews re-coded as needed. 7. Summary sheets created and sent to all participants with their transcript. 8. Follow-up interviews conducted.
Phase III	9. Database created to facilitate further analysis. 10. Two rounds of analysis and re-coding. 11. Peer Review #2. 12. Coding scheme finalized. 13. All codes with supporting data printed to facilitate reporting of outcomes.

The final part of this section then provides an analysis of this theme.

Who Needs a Definition of HRD?

A powerful theme that emerged during this study came from one participant in particular who passionately argued against a definition for the profession:

> " *Who needs a definition? Our field is strengthened by having different schools of thought and by its diversity. I firmly believe that. I am equally as strong about saying that I'm not right because I'm here and you're not wrong because you're there. We're different. We're going to work with different organizations, we're going to work for different objectives with different goals. Fine. I don't need to control your definition and I'm certainly not going to let you control mine.*

Diversity of the field and the people in it were central values for this person, who also argued against positions that are too normative and that tend to lowlight the unique qualities that people contribute to the world:

> " *It's always appropriate to have an opening definition—open for conversation and exploration and differences of opinion. Nothing wrong with defining. What get's wrong, from my point of view, is when you say that I have the right definition. That's when I'm going to resist. ... I am a person who applauds and celebrates ambiguity. I am distressed by the drive to have to find "the" answer. The normative perspective that you see in some areas of HRD drives me nuts just as I'm sure my willingness and openness to ambiguity has to drive other people nuts.*

The drive to define was not an issue for this participant who went on to explain that they define HRD as a community of individuals who consciously and continuously choose to be a part of the HRD community:

> " *It's only a problem if you are driven by trying to define your field and your expertise. I don't feel a need to do that. I don't think it's appropriate to do that. You know, I'm perfectly OK with letting you define it any way you want to define it. If you're comfortable being in there with me then you're in the right place. If you aren't, then you're in the wrong place or I'm in the wrong place, so we need to figure that out. I think those individual decisions is what makes community. For me they are all one of the same system, so individuals are community when they come together.*

One of the basic premises of this person's view was that the complex nature of systems and the real work that gets done in the world simply cannot be so clearly and statically defined:

- *It's driven by the artifacts of organizational life that require us to define disciplines. This whole thing about disciplines emerging and maturing and going through stages and so on, I think it's all baloney. It's not baloney in the sense of how life is actually lived. I think it's an accurate description. But I don't think it's the way it has to be. Why do we have disciplines? Why don't we see life as a holistic complex of perspectives, values, theories, constructs coming together?*

- *Is expertise needed in an organization? Yes, absolutely. Does that mean that we then segment our lives so that all of our life becomes this small, narrow, itty-bitty piece? This organization I was working in, the focus of the consulting is restructuring of the staffing of this office, and they have traditionally been organized in silos. When I did my interviews everyone was frustrated with that because they saw that that's not the world they live in. They have expertise there, but the world is much more complex than a silo.*

  And so if you see everything from a functional perspective you don't ever really address the important complex questions. The complex questions require multiple skills, they require multiple expertise, they require a view of the total organization as a system—you don't get that from a functional perspective. We're so pushed in our culture to get the right answer that we're not allowed to be creative, we're not allowed to live with ambiguity, we're not allowed to let things happen as they happen. We've got to have the answer. Well, that's not the world I live in. People have to work in the context in which they find themselves.

- *That assumes a static world with static individuals. I can give you a definition now and you can come back to me in 2 hours and whatever has happened to me in 2 hours I might have twisted it and changed it, I might have raised questions about it.*

Part of that complexity, too, is something that this person argued the western mindset does not naturally acknowledge and effectively deal with:

- *I think it's driven by the western ethno-centric mindset of having to put things in boxes. I don't like that. It makes no sense to me. It's a continuum. But we don't like to think in terms of continuums in this country, and I think that's what drives us around defining our discipline, defining our competencies, credentialing, etc...*

Another participant also raised some concern about the complacency that can set into a field when there is a lack of diversity:

- *If you read, for example, Thomas Kuhn's work and think about what he'd call normal science where the field has a general agreed upon paradigm and most of what goes on with that is incremental kinds of research and so forth and that there's actually a complacency that sets in when you reach that, if you ever reach it. And I'm not sure you ever do. In fact, I wonder if we ever should. Because then you also become insular. I'm not sure that it's a bad thing, in a research community in particular, that there are competing paradigms. I mean take psychology. Have they ever settled the behaviorism versus cognitivism debate?*

Finally, a participant also raised the issue of the diversity of roles inherent in the field and wondered whether the roles in and of themselves necessitated minimal definition:

- *I think another issue is that there's a certain assumption that seems to come through that HRD is a unified field. I see huge differences between my colleagues who see themselves primarily as training experts and those who see themselves primarily as OD experts and those who see themselves as CD experts. There are vastly different values driving those functional components of HRD.*

Define What HRD is and What it is Not

There were strong voices advocating for some explicit definition of the profession of HRD. A few participants explicitly called for it:

- *In strategy you define yourself partly by what you are and what you aren't. And it is decisions when you say "we're not going to do that" that as much define your strategy as what you do decide. I think some of that logic carries over to defining an academic discipline. If you're everything, you're nothing. What are the streams of research? What are the domains of interest we study? How, then, can we distinguish ourselves from other kinds of things? I think that's important. You need some identity, and I think the struggle to do that in HRD constrains us some.*
- *I believe it goes back to our core beliefs as to what we do and don't do. You know, it all cascades. And if we don't do it, and it becomes an important issue, somebody else is going to run with it. And that's been the history of our field because we haven't had core beliefs and core processes...we haven't had a deep understanding of what we do and don't do and what we promise and don't promise, and then evidence of delivering on what we promise.*
- *And if we evolved a clearer fundamental perspective and a narrower view, although the view may be a broad view, but a view that is definable that people can recognize and understand...this would lead us more closely to becoming a profession.*

Many more voices surfaced as participants discussed benefits of defining the profession. Specifically, a few key ideas could be identified. The first came from one person who passionately reflected on the ethics involved with HRD needing to define what it does and then deliver on that:

- *...well, I use the word integrity...but if we had any integrity at all then our core beliefs are an expression of that integrity. And if we don't have theories, tools, methodologies, and processes that in fact deliver on our core beliefs, then we have no integrity. So we get ourselves totally disconnected from our core beliefs...Some people want to argue about what we're in the business for—we're in the business of learning, we're in the business of performance improvement...I don't care! But if you say you're in the business of learning, show me that that happens at the end. And so if you haven't made that clear that this is your purpose or core beliefs, or value or mission, then you can get distracted very easily. The HRD profession would be excellent if it delivered on its promise.*

Another person echoed the above sentiment in explaining that a definition of HRD is simply that which HRD says it is credible for:

- *...that's the definition of Human Resource Development—what is it that you're credible for. If you're a credible attorney, that means that you know certain kinds of things. If I come to you, I should be able to get, no matter you practice law, I would get the same answer. Now that isn't absolutely true, but it makes it clear enough...*

A second powerful idea emerged when more than a few participants shared a particular reason why they felt so strongly that the field should define itself. In their view, if HRD doesn't define itself, the organizations that HRD professionals work in will.

- *In a way we not only define ourselves as a group, as a profession, but our individual practice is also defined by the organizations we reside in. And, so if I reside in X organization and they say this is what HRD is going to be I'll still practice HRD. If I was an accountant or a social worker or a counselor or a therapist and I worked in an organization...well, you can't tell me I have to act or practice my profession a certain way unless, of course, it's unethical. Because I have certain standards and beliefs around which, you know, you don't fudge numbers if you're an accountant*

> *just because the organization wants you to. You don't reveal confidentiality if you're a therapist just because your organization wants you to, or tell people they have to operate in a certain way, counsel people to operate in a certain way...*
>
> *Those professions are based on a given set of beliefs and standards around the profession, not around the organization in which they operate. But we don't have that grounding. So we walk into an organization and they say "do this" and we don't have anything to pull back on. What if we were able to develop and articulate and ground ourselves with a set of beliefs and values around who we should be, irrespective of what organization we work for and be a truly independent profession that stands on it's own values, not on the organizational context in which we work? That to me is a radical view!*

- *The reality is that employer's control entry into our profession and they don't know anything about HRD!*
- *People in HRD, because they've come often with no training whatsoever in HRD and there's kind of a feeling in the organization that it can be this or that...it's not as strong as it used to be, but it's still enough out there that the notion that some kind of strong ethical foundation should drive your practice is wholly lacking.*

Third, and related to not wanting the organization or context to define HRD, some people talked about how individual definitions of HRD should not be more highly valued than some type of definition that may be more representative of the community of HRD.

- *And hence if you said that you're doing Human Resource Development, that's what you're doing. If you say you don't feel that you are, then you're not, even though from my point of view you may be doing that. And I think that's what's hurting us.*
- *So it's part of that whole idea of leaving things down at the individual-level. I think that's one of the beliefs that most people in the profession have—that individuals have the freedom and ability to decide for themselves what they want to do, when they should do it, how, dah, dah, dah. The minute you're making some decisions as a sub-system of this larger organization, it seems to me you have a different responsibility at that point. And so how you choose what's in and what's out is really important. And if you don't have tools and theories to make those decisions, it seems to me you're just going to be drug around or you're going to end up having some childlike notions that you're responsive to everything, while the reality is that you can only be responsive to a limited number of things. So you feel an enormous burden and, in fact, you're getting no where. And we have a lot of people in our field that are like that, really burdened by it. They're goodness and the goodness of the profession, are really doing very little to help the people, let alone the organization. I think those are just two different things—core beliefs of the profession versus core beliefs for the individual.*
- *And some people say "I have my own personal set of beliefs" and I believe many do. But many of those people have developed them over time, number one. Number two, they can afford to have them. That's a reality! I mean some have this reputation and a long history of experience that allows them to say "if I don't want to work with you, I won't". Some others of us who've got to put bread and butter on the table may not be able to afford to say that. You know, the starving...there's not a lot of starving artists among us that'll stand up if we've got to feed our families or ourselves. But if we had a set of beliefs, we could at least again start to move—stand on those and depart from them, but at least we're departing from something that is solid ground. It's not the quick sand that we stand on now.*
- *There are a lot of behavioral psychologists around. That doesn't make them right, that's just because they're there. They see that as a way of managing a situation and*

> *I say that's fine. It's not what should represent the profession, put it that way. It certainly might be an element of it, a part of it, but shouldn't be the driving force*

Embedded in the above quotes is also a premise that was articulated by some participants a little later in their interviews—that is, that HRD is, or should be, a community with some things in common.

- *The creation of the Academy of Human Resource Development, for instance, implies that there is a kind of a professional definition that can be associated with that group, otherwise why would we need to have such a group. It seems that if it's necessary for people to get together to achieve these objectives and to get organized that the implication is that it is possible to conceive of this as a kind of professional area.*

Those participants who advocated not wanting individual definitions to dominate also offered their conception of the role of individual beliefs in terms of the profession's development:

- *I don't think an individual can raise their core beliefs above the workgroup. Now they can use their core beliefs to change the profession or change their workgroup. That makes perfect sense. But to think that you should have ten different people in a department with a set of totally inconsistent and incoherent beliefs and functioning day to day, I think is insane. So I think that if you can't find some higher level core beliefs that are widely held and articulated you're either compelled to mute yourself a bit, or to do the work. But they have to lead the profession at that point. It's not held quietly inside. I think that most individual core beliefs are held personally, deeply, and quietly and that's different from being public and publicly-owned. The journey is getting that to happen. That's work in itself. Either we have the scholarly role in leading that, or we have practitioners that are in highly responsible positions that are leading.*
- *I think it should be educational. People should learn from these little debates and discussions and evolve a point of view that could be defined, described, and that would constitute something that would be acceptable among those people who are the major movers in the field. And if you're peripheral, if you're marginal, then that question should not control the discourse in the field. But I think if somebody has a point of view they should express it and that the field would be better for it if we can evolve a perspective, a point of view that is justifiable, then it would lead us closer to become a profession.*

Finally, various participants of the study offered a variety of other benefits that they believed would result from defining the field. Due to space restrictions, these will only be presented during the symposium presentation or are available from the author directly.

Analysis of Findings

In the findings presented above, two themes were presented that described compelling arguments for and against defining the HRD profession. It is interesting to note two underlying premises of these arguments. First, those who argued for bounding the field seemed to be more focused on the external demands of the world. Their justification was largely grounded in recognizing external realities such as what seems necessary to become a credible profession and not letting organizations define the profession. The participant who rejects defining the profession also rejects this reasoning. Rather that person argued that needing to define is an artifact of the external world and that bounding things in this way is simply not reflective of how the world is and how real work gets done out there.

Second, one can also see in this data that those who advocated definition view HRD as a community and are concerned with that community acting in concert. A few participants, for instance, talked about how individual perspectives of the profession should not be more highly valued than those of the community. The participant who argued against defining, on the other hand, views community fundamentally differently as a process of individuals self-selecting into something that is close enough to their perspectives/values. This person also celebrated the diversity inherent in a community, whereas those who argued for definition struggled with this fine line between individual and profession.

These two differences are central in truly understanding people's perspectives on this and many other issues central to the evolution of the profession. Part of the purpose of this paper has been to share each "side" of this argument a little more fully than what has been available in the past and to understand the assumptions that drive the argument that most are able to hear. In addition, it is so important to mention that these arguments are much more rich and full than can be adequately presented here. Most notable is that due to severe space restrictions it is impossible to share key themes that emerged from those participants who advocated defining the field and then offered specific possibilities of what that might look like. These themes are briefly introduced in Table 3 and warrant a future paper.

Table 3. What Defining/Bounding the Field Could Look Like: Views of Leading Scholars.

Theme	Brief Description of the Theme
Embracing the whole	Participants describe their desire to define some type of boundary that is more inclusive of the diversity in the field, while also struggling with the inherent costs of excluding important HRD areas.
Foster multiple rivals	Rival definitions of the field are encouraged even as participants wonder what that might look like, how a field holds multiple definitions/missions as important, and how rival definitions should be judged.
Mange the tension	Participants who advocated defining the profession also talked about the challenge of 1) managing the tension between extremes that are necessary for progress and 2) pushing the boundaries of that definition to guard against stagnancy.
Potential Bounds	Participants offered multiple ways that the profession could be defined. Sub-themes included potential bounds such as: 1) Philosophy (mission, values, epistemologies, etc...), 2) Ethics (codes of ethics and standards of practice), and 3) Foundational theory and knowledgebase.

Contribution to New Knowledge in HRD

HRD is at a critical stage—growing from its early development to a more mature stage where it has the potential to make great contributions to organizations and the humans that work in them. Most people that come to HRD are drawn by their desire to help individuals and organizations in some way. It is that same motivation that draws scholars into thinking about the profession itself and that is the impetus for this study. Growth of the HRD profession should be a conscious process. Part of growing *well* is reflecting on HRD's evolution—where the field has been, where its going, and where it needs to go to optimize its impact.

This study provided a unique opportunity to listen-in on the conversations of leading scholars in the field about what they feel is important around this issue of bounding and clarifying the field—through results that have been systematically gathered and analyzed using rigorous qualitative methods. It is hoped that this will provide some new perspective and insight into the issue as well as provide ample opportunity for personal reflection about your own role in the growth of the profession.

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Strategic Roles of Human Resource Development in the New Millennium

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This paper discusses the foundations of strategic intent for Human Resource Development (HRD), the schools of strategic thinking, the strategic roles for HRD, and their implications for strategic organizational planning.

Keywords: HRD, Strategic Roles of HRD, Foundations of HRD

Problem Statement

The human resource development (HRD) profession has had a continuing fascination with means versus ends. The indicators of this are clear: HRD interventions focus on process techniques versus appropriateness to goal attainment (Swanson, 1996) and studies show that evaluation practices focus almost exclusively on individual perceptions versus actual knowledge and performance change (Bassi, L. & Cheney, S., 1996). When the profession does speak of strategy, the most it can typically see is the alignment of HRD activities with organizational strategy (Rothwell & Kazanas, 1989).

The problem facing the HRD profession is the need to develop a mature picture of itself. The resulting question, "What is the strategic role of HRD?" and the development of a theoretically sound and internally consistent response is the focus of this paper including sections on the foundations of strategic intent for HRD, schools of strategic thinking, and strategic thinking in HRD.

The Foundations of Strategic Intent for HRD

Organizational strategy is concerned with the match between the internal capabilities of the organization and its external environment (Kay, 1999). For human resource development (HRD) to contribute to organizational strategy, it must first create a clear picture of itself. The HRD foundations that contribute to strategic intent include: defining HRD, articulating core HRD beliefs, viewing HRD as a process within a larger system, and articulating the theoretical foundations of HRD. While there is no one right response to these foundational questions, having a thoughtful response with internal consistency among its components is believed to be crucial. The following is one thoughtful and responsible response as to the foundations of HRD.

Definition of HRD

HRD is a process of developing and unleashing human expertise through organization development (OD) and personnel training and development (T&D) for the purpose of improving performance.

- The domains of performance include the organization, work process, and group/individual levels.
- OD is the process of systematically implementing organizational change for the purpose of improving performance.
- T&D is the process of systematically developing expertise in individuals for the purpose of improving performance.
- The three critical related areas of HRD include human resource management, career development, and quality improvement.

Core HRD Beliefs

1. Organizations are human-made entities that rely on human expertise in order to establish and achieve their goals.

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2. Human expertise is developed and maximized through HRD processes and should be done for the mutual long-term and/or short-term benefits of the sponsoring organization and the individuals involved.
3. HRD professionals are advocates of individual/group, work process, and organizational integrity.

The HRD Process Within the Larger System

HRD is a process or system within the larger organizational and environmental system. As such, it has the potential of harmonizing, supporting and/or shaping the larger systems of which it is a part.

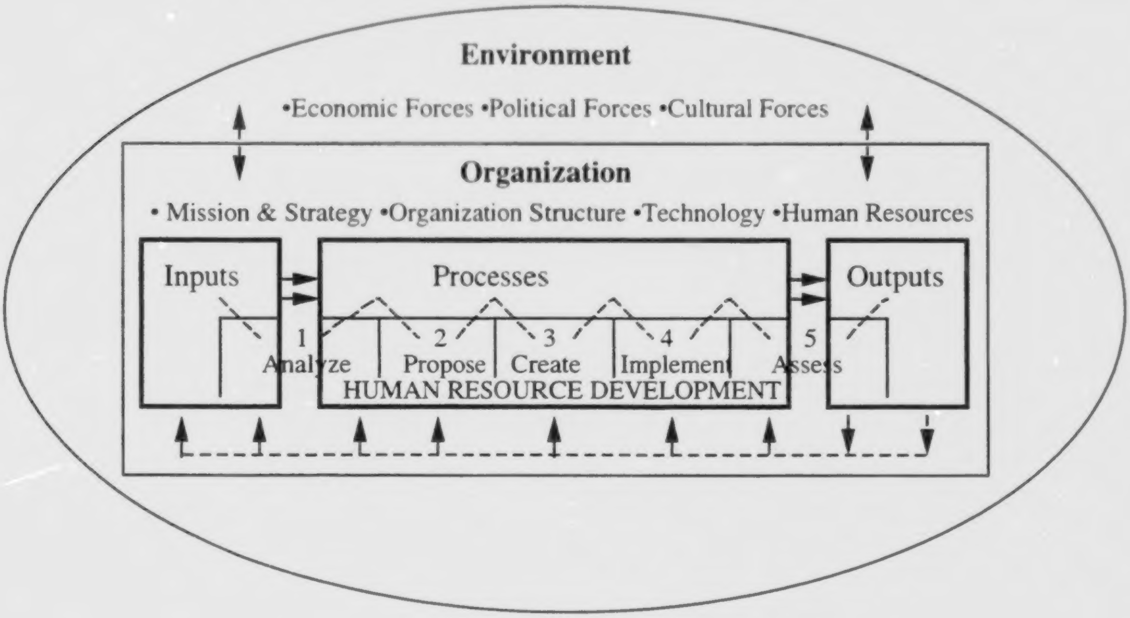
Environment
•Economic Forces •Political Forces •Cultural Forces
Organization
• Mission & Strategy •Organization Structure •Technology •Human Resources
Inputs
Processes
Outputs
1 Analyze
2 Propose
3 Create
4 Implement
5 Assess
HUMAN RESOURCE DEVELOPMENT

Figure 1 Swanson, 1996, p. 251

Theoretical Foundation of HRD

The discipline of HRD, in order to understand, explain, and carry out its process and roles, relies on three core theories. They include: (1) psychological theory, (2) economic theory, and (3) systems theory.

- *Psychological theory captures the core human aspects of developing human resources as well as the socio-technical interplay of humans and systems.*
- *Economic theory captures the core issues of the efficient and effective utilization of resources to meet productive goals in a competitive environment.*
- *Systems theory captures the complex and dynamic interactions of environments, organizations, work process, and group/individual variables operating at any point in time and over time.*

The three component HRD theories and their integration are visually portrayed as a 3-legged stool. The legs represent the component theories, and the stool's platform represents the full integration of the three theories into the unique theory of HRD. While the stool rests firmly on the floor or the host organization, an ethical rug serves as a filter through which the integrity of both HRD and the host organization can be maintained.

The systems view of organizations, HRD as a process within the organization, and the organization function within the larger environment provides the big-picture framework with which to begin thinking about the strategic roles of HRD (Swanson, 1996, p. 251).

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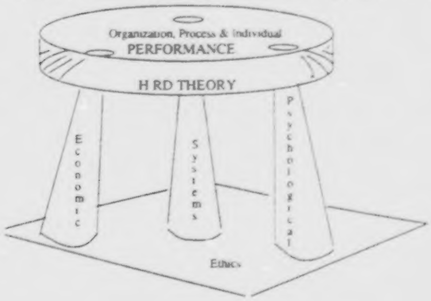
Figure 2 The Theoretical Foundations of Human Resource Development



Schools of Strategic Thinking

Mintzberg, Ahlstrand, and Lampel (1999) have summarized ten schools of strategic thinking. They argue that having a wider picture allows managers, consultants, and academics to better understand and pursue strategy. The schools are summarized through comparison of their features including: sources, base discipline, champions, intended messages, realized messages, school category, and an associated homily.

1. Design School

• Sources	P. Selznick
• Base discipline	None (architecture as a metaphor)
• Champions	Case study teachers (e.g. Harvard) leadership aficionados-especially in the USA
• Intended messages	Fit
• Realized messages	Think (strategy making as case study)
• School category	Prescriptive
• Associated homily	*"Look before you leap."*

2. Planning School

• Sources	H. I. Ansoff
• Base discipline	Some links to urban planning, systems theory, & cybernetics
• Champions	Professional managers, MBAs, staff experts, consultants & government controllers
• Intended messages	Formalize
• Realized messages	Program (rather than formulate)
• School category	Prescriptive
• Associated homily	*"A stitch in time save nine."*

3. Positioning School

• Sources	Purdue University work (D. Schendell & K. Hatten) then notably M. E. Porter
• Base discipline	Economics (industrial organization) and military history.
• Champions	Analytical staff types, consultants, and military writers.
• Intended messages	Analyze
• Realized messages	Calculate (rather than create or commit)
• School category	Prescriptive
• Associated homily	*"Nothing but the facts, ma'am."*

4. Entrepreneurial School

• Sources	J. A. Schumpeter, A. H. Cole, & others in economics
• Base discipline	None (although early writings came from economics)
• Champions	Popular business press, individuals, small business people everywhere
• Intended messages	Envision
• Realized messages	Centralize (then hope)
• School category	Descriptive (some prescriptive)
• Associated homily	*"Take us to your leader."*

5. Cognitive School

• Sources	H. A. Simon & J. G. March
• Base discipline	Psychology (cognitive)
• Champions	Those with a psychological bent- pessimists in one wing and optimists in the other
• Intended messages	Cope or create
• Realized messages	Worry (being unable to cope in either case)
• School category	Descriptive
• Associated homily	*"I'll see it when I believe it."*

6. Learning School

• Sources	G. Lindboim, R. Cyert & J. March, K. Weick, J. Quinn, & C. Prahalad & G. Hamel

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• Base discipline	None (perhaps links to learning theory in psychology & education; chaos theory)
• Champions	People inclined to experimentation, ambiguity, & adaptability
• Intended messages	Learn
• Realized messages	Play rather than pursue
• School category	Descriptive
• Associated homily	*"If at first you don't succeed, try, try again."*

7. Power School

• Sources	G. Allison (micro), J. Pfeffer & G. Salancik, & W. Astley (macro)
• Base discipline	Political science
• Champions	People who like power, politics, & conspiracy
• Intended messages	Promote
• Realized messages	Hoard (rather than share)
• School category	Descriptive
• Associated homily	*"Look out for number one."*

8. Cultural School

• Sources	E. Rhenman & R. Normann
• Base discipline	Anthropology
• Champions	People who like the social, the spiritual, & the collective
• Intended messages	Coalesce
• Realized messages	Perpetuate (rather than change)
• School category	Descriptive
• Associated homily	*"An apple never falls far from the tree."*

9. Environmental School

• Sources	M. Hannan & J. Freeman, Contingency theorists
• Base discipline	Biology
• Champions	Population ecologists, some organization theorists, & positivists in general
• Intended messages	React
• Realized messages	Capitulate (rather than confront)
• School category	Descriptive
• Associated homily	*"It all depends."*

10. Configuration School

• Sources	A. Chandler, H. Minzberg, D. Miller, & R. Miles & C. Snow
• Base discipline	History
• Champions	Lumpers & integrators in general, as well as change agents.
• Intended messages	Integrate, transform
• Realized messages	Lump (rather than split, adapt)
• School category	Descriptive & prescriptive
• Associated homily	*"To everything there is a season."*

These roles help to understand the basis of strategic thinking in organizations and HRD. They also help explain alternative visions of future states and approaches to positive change. For example, most HRD leaders would more comfortably fit in the "Learning School" compared to the "Entrepreneurial School."

Strategic Thinking in HRD

Torraco and Swanson (1996) discuss the theoretical issues surrounding the role of HRD in strategic organizational planning. They note two factors that have influenced the evolution of HRD toward a more active role as a key determinant of business strategy: the centrality of information technology to business success and the sustainable competitive advantage offered by workforce expertise.

These factors work together in such a way that the competitive advantages they offer are nearly impossible to achieve without developing and maintaining a highly competent workforce. They go on to build the case for HRD that is truly of strategic value to an organization is (1) performance-based; (2) demonstrates its strategic capability, and (3) is responsive to the emergent nature of strategy.

Strategic Roles of HRD

HRD is defined as a process for developing and/or unleashing human expertise for the purpose of improving performance at the organizational, work process, or individual contributor levels (Swanson, 1996).

Furthermore, three strategic roles for HRD have been put forward by Torraco and Swanson (1995). These three HRD strategic roles used as the springboard of this inquiry are described as follows:

Performance-Based HRD HRD has a history of serving a wide range of organizational demands and interests from the personal development needs of individuals to organizational transformations involving everyone in the organization. When HRD addresses the personal interests of employees, it is most likely not being strategic. For HRD to offer real strategic value to the organization, it must contribute directly to important business goals and must be based on key business performance requirements (Swanson, 1996).

Demonstrating the Strategic Capability of HRD To fully demonstrate the strategic importance of HRD, it must be more than performance-based. HRD will only be perceived as having strategic value if it also demonstrates genuine *strategic capability*. As HRD demonstrates *strategic capability*, it earns respect and credibility as a full partner in forging the organization's future direction.

Strategic capability challenges HRD to contribute beyond interventions that support a given strategic initiative. *Strategic capability* is based on a HRD philosophy that reflects the value of human resources in the pursuit of long-range business goals and the conviction that people are the only organizational resource that can shape and recreate the ways in which all other business resources are used. HRD demonstrates its *strategic capability* to the organization's business planning process by: (a) providing education and learning in the concepts and methods of strategic organizational planning to those responsible for setting the strategic direction for the organization and (b) having HRD professionals directly participate in the strategic organizational planning process. Together these two features dramatically emphasize HRD's value to the business planning process and distinguish HRD as having *strategic capability*.

Emergent Strategy and HRD HRD traditionally has served a role supportive to strategy. HRD that primarily serves to support the execution of a given strategy fills an adjunctive role to strategy that is clearly more *deliberate* than *emergent*. Thus, a majority of the HRD effort purporting to be strategic provides the workforce with important expertise after the formulation and adoption of strategy by others. HRD cannot add value to the shaping of strategy if the strategy is already fully formulated.

If strategy is treated as both a deliberate and emergent phenomenon, the benefits of developing and using employee expertise to capitalize on evolving business opportunities can then be realized. The potential for HRD's strategic leverage must exist by treating strategic planning as an emergent process. Further prescriptions for advancing the strategic contributions of HRD are of little value if strategy is fully formulated and adopted without the performance perspectives that HRD offers.

Scenario Building and Strategic Planning

Parallel to the concept of traditional strategic planning is the idea of scenario building. Schwartz (1996) defines a scenario as, "A tool for ordering one's perceptions about the future environments in which decisions might be played out" p. 4). This tool is most often in the form of a story or plot lines which allows the organization members to fully explore a rich story of possible future events. These scenarios are stories describing the current and future states of the business environment and they become 'stories' about alternative possible futures (van der Heijden, 1996).

"Scenarios deal with two worlds: the world of facts and the world of perceptions. They explore for facts but they aim at perceptions inside the heads of decision-makers. Their purpose is to gather and transform information of strategic significance into fresh perceptions" (Wack, 1985a, p. 140). Used in this way, scenario planning presents "... an efficient approach to strategic business planning, focusing on business ideas in an uncertain world" (van der Heijden, 1996, p. 2). The problem is one of not knowing the fit between strategic planning and scenario building along with the role of HRD in shaping and supporting strategic organizational planning.

Miller, Lynham, Provo, and St. Claire (1997) have provided a useful overview of scenario building for the HRD profession. The following summary mirrors their analysis of the scenario building component of strategic organizational planning along with the traditional strategic planning component:

As more organizations face continuous change as the order of the day, organizational professionals have developed expertise and tools to operate successfully in such an environment. The traditional tools of strategic planning, which are commonly extrapolations of the past to determine the future, are not effective when future forces do not mirror past forces (Mintzberg, 1994). In an environment of constant change and challenge, non-traditional tools for anticipating and planning for change are needed. One such tool is scenario building.

A scenario is "a tool for ordering one's perceptions about alternative future environments in which decisions might be played out" (Schwartz, 1996, p. 4). The process of scenario planning generally involves development of several plots and supporting narratives that illustrate primary forces driving change within a system, their interrelationships, and uncertainties in the environment (Wack, 1985a). Scenarios help decision makers structure and think about uncertainty, test their assumptions about how critical driving forces will interact, and reorganize their mental model of reality (Wack, 1985b).

Scenario development is described as an art rather than a science (Schwartz, 1996). By providing safe and often engaging opportunities to explore the implications of uncertainty and to think through ways of responding to it, scenarios enable planners to deal more confidently in the midst of uncertainty (Schwartz, 1996; van der Heijden, 1995).

Van der Heijden (1996) characterizes the individual and organizational learning process of scenario building: by organizing complex information on future trends and possibilities into a series of plausible stories, scenarios are seen as interpretive tools that create meaning and thereby guide action. The use of multiple plausible futures helps decision-makers think more expansively about change and to adopt multiple perspectives for the purpose of understanding future events. In the end, scenarios offer entrepreneurial and protective benefits to organizations (Wack, 1985a).

The Centre for Innovative Leadership (van der Merwe, 1997) describes the scenario development process as follows:

1. Identification of a strategic organizational agenda (including assumptions and concerns about current strategic thinking and vision).
2. Challenging of existing assumptions of organizational decision-makers by questioning current mental models about the external environment.
3. Systematically examining the organization's external environment to improve understanding of the structure of the key forces driving change.
4. Synthesis of information about possible future events into three or four alternative plots or story lines about possible futures.
5. Development of narratives around the story lines to make the stories relevant and compelling to decision-makers.
6. Use of the stories to help decision-makers "review" their strategic thinking.

Traditional *strategic planning* refers to the business planning and systems thinking required of those responsible for setting the strategic direction for the organization (Mintzberg, 1994). Presumably, those who participate in strategic planning possess the business acumen and understanding needed for meaningful contributions to long-term planning. However, strategic planning by itself requires a sophisticated array of conceptual, analytical, and interpersonal skills. Business planning involves strategic decisions that are frequently group decisions. Planners, therefore, need skills in problem definition, facilitating analysis by the group, resolving communication breakdowns, reaching consensus, and building commitment. Skills associated with strategic planning include environmental scanning, analyses of industries and competition, organizational analysis (e.g., "SWOTs"), competitive benchmarking, using systems frameworks to identify inconsistencies and threats to business development, and clarifying and articulating a unified organizational mission.

Together, *scenario building* and *strategic planning* are proposed as a holistic view of strategic organizational planning (SOP). Figure 1 graphically illustrates the SOP components and their relationships. The SOP "double funnel" graphically contrasts the roles and relationships between scenario building and strategic planning in the SOP process. Scenario building flares out the thinking in its expansiveness, and strategic planning reins in the thinking into an action plan. All the while, both SOP phases are operating in the complex environment and SOP is viewed as a continuing process. HRD engages in supporting and shaping the entire process.

Contributions of HRD to Strategic Organizational Planning

What, then, are the potential contributions of HRD to strategic organizational planning (SOP)? In order to explore this question a matrix of the three HRD strategic roles in context of the two SOP components, scenario building and strategic planning, is proposed in Table 1. It is important to highlight the definitions of scenario building as an expansive process and strategic planning as a reductionist process as being crucial to the exploration of the interpretation of HRD contributions to SOP.

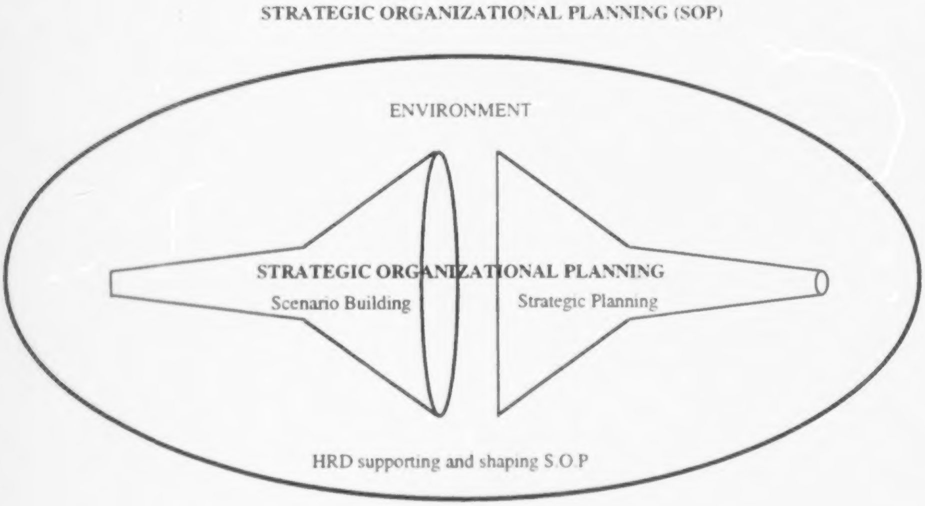
STRATEGIC ORGANIZATIONAL PLANNING (SOP)
ENVIRONMENT
STRATEGIC ORGANIZATIONAL PLANNING
Scenario Building
Strategic Planning
HRD supporting and shaping S.O.P

Figure 3
Source: Swanson, Lynham, Ruona, & Provo, 1998, p. 591

The Strategic Organizational Planning Research Agenda facing the HRD Profession

The following research agenda is based on the contribution cells of the supporting and shaping of strategic organization planning matrix (Table 1). The three strategic roles of HRD are used as the major organizers of the proposed research agenda.

Performance-Based

1. From a *strategic planning* perspective, the profession needs to learn why HRD is not able to consistently provide a road map for developing and/or unleashing the human expertise required of an organization to achieve its strategic plan and is not able to consistently fulfilling its commitment to execute its related SP action plans.
2. From a *scenario building* perspective, the HRD profession needs to cull out valid tools for making critical judgments as to an organization's probability of being able to develop and/or unleash the human expertise required of the various scenarios.

Table 1
Human Resource Development's Contribution in Supporting and Shaping Strategic Organizational Planning

	STRATEGIC ORGANIZATIONAL PLANNING (SOP)	
HRD STRATEGIC ROLES	***SCENARIO BUILDING*** *Defined:* SB is a process for ordering perceptions about the future environments in which decisions might be played out (Schwartz, 1991, p. 4).	***STRATEGIC PLANNING*** *Defined:* SP is a process for developing a comprehensive statement of the organization's mission, objectives, and strategy
PERFORMANCE-BASED *Defined:* HRD must contribute directly to important business goals and must be based on key business performance requirements (Torraco & Swanson, 1995, p. 17).	*Contribution:* • HRD provides critical judgements as to the organization's probability of being able to develop and/or unleash the human expertise required of the various scenarios being proposed and what each would require.	*Contribution:* • HRD provides a road map for developing and/or unleashing the human expertise required to achieve the strategic plan and commitment to execute related SP action plans.
STRATEGIC CAPABILITY *Defined:* To demonstrate genuine strategic capability HRD (a) provides SOP education and learning, and (b) actively participates in the SOP process (Torraco & Swanson, 1995).	*Contribution:* • HRD oversees the SB education and learning required of personnel for building "shared, integrated mental models of multiple plausible futures" (Lynham, Provo & Ruona, 1998, p. 6). • HRD experts serve as contributors of key human resource information and value all information being considered during the SB process.	*Contribution:* • HRD oversees the SP education and learning required of personnel for planning strategy, including the analysis and synthesis of internal and external conditions. • HRD experts participate on the SP team and act as a catalyst to create new business based on the strategic development and/or unleashing of human expertise (Mintzberg, 1994).
EMERGENT STRATEGY *Defined:* HRD assumes a deliberate role in the emergent nature of SOP (Torraco & Swanson, 1995).	*Contribution:* • HRD creates and maintains "an institutional learning and memory system...and helps an organization avoid repeating mistakes" (Van der Heijden, 1996, p. 2.) within the realm of core expertise and new learning requirements. • HRD assumes itself critical to the ongoing strategic SB conversations of the organization. SB makes "discussing strategy a natural part of any [HRD] management task and not the exclusive domain of specialist" (Van der Heijden, 1996, p. 22).	*Contribution:* • HRD creates and maintains a system for ongoing learning (in the forms of internalization, comprehension, and synthesis) from its own SP effort. • HRD assumes itself critical in the catalytic information-sharing, strategic partnering, and strategy finding SP challenge facing its host organization. (see Mintzberg, 1994).

Source: Swanson, Lynham, Ruona, & Provo, 1998, p. 592

Strategic Capability

3. From a *strategic planning* perspective, the HRD profession needs to develop and validate a core strategy for overseeing the SP education and learning required of personnel for planning strategy (including the analysis and synthesis of internal and external conditions).
4. From a *strategic planning* perspective, the HRD profession needs to develop and validate a process (grounded in performance-based strategic contributions) for legitimizing their role as experts on the SP team in creating new business based on the strategic development and/or unleashing of human expertise.
5. From a *scenario building* perspective, the HRD profession needs to develop and validate a core strategy for overseeing the SB education and learning required of personnel for building shared, integrated mental models of multiple plausible futures.
6. From a *scenario building* perspective, the HRD profession needs to develop and validate a process (grounded in performance-based strategic contributions) for legitimizing their role as experts on the

SB team in contributing key human resource information and valuing all information being considered during SB.

Emergent Strategy

7. From a *strategic planning* perspective, the HRD profession needs to develop and validate a system for creating and maintaining ongoing learning and systems thinking (in the forms of internalization, comprehension, and synthesis) from its own SP effort.
8. From a *strategic planning* perspective, the HRD profession needs to develop and validate a SP process of information-sharing, strategic partnering, and strategy finding critical to its host organization.
9. From a *scenario building* perspective, the HRD profession needs to develop and validate an institutional learning and memory system that helps an organization avoid repeating mistakes within the realm of core expertise and new learning requirements.
10. From a *scenario building* perspective, the HRD profession needs to develop and validate a process of engaging in ongoing strategic conversations of the organization from the HRD perspective.

Conclusion

HRD has been traditionally relied upon to serve in roles that are supportive of the strategies chosen to guide organizations. Although the supporting role of HRD is important for operational success in assuring the employee competence to meet present performance demands, HRD offers even greater strategic value as a major force in the shaping of business strategy. This strategic role will most likely be achieved through a purposeful connection of sound theory and practice-- the grist of Human Resource Development scholars around the world.

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Shaping a Learning Vision: Life Histories of Learning Leaders and Facilitators

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This paper draws on life history interviews with learning organization facilitators to identify transforming events that shaped the learning visions of these key change agents. Interviews with organization developers and senior managers of organizations working to make learning a central driver of innovation and change were conducted. From these interviews, key lessons for facilitators and leaders of learning organizations were identified.

Keywords: Learning Organization, Life History, Qualitative Research

The learning organization is defined as an organization that has created an infrastructure to support continuous learning and knowledge creation. In this study, we use a model that defines the learning culture at the individual, team or group, organizational, and societal levels that is characterized by seven dimensions (Watkins and Marsick, 1993, 1996; Marsick and Watkins, 1999). From this theoretical framework, we have drawn implications for facilitators of learning organizations. What is less known is what learning the facilitators themselves bring to the task of designing learning organizations. The purpose of this study was to identify key attitudes, skills and knowledge of learning organization facilitators that evolve from critical life experiences. We asked: What life experiences do these people report as particularly influential in shaping their learning organization perspectives?

We adopted a constructivist perspective that suggests that people co-create meaning within lived experiences (Schwandt, 1990) to investigate the lived experience of learning organization facilitators. This was a qualitative study that drew on critical incident [Flanagan, 1954, Ellinger & Watkins, 1997] methodology for data collection. Convenience sampling of those individuals whose learning organization work we had followed for two or more years resulted in six interviews from four organizations. Interviews were conducted by the authors and by our two collaborators. We interviewed three senior managers and three organization developers. We drew on the biographical tradition in constructing these life history vignettes (Creswell, 1998). We used content analysis to develop themes from the interviews and to compare themes across the six cases (Miles and Huberman, 1994).

The Leaders: Jerry, Ralph, and Pete

In this paper, we draw on our interviews with three senior managers to peer into the paths that they took as leaders.

I can't work where I can't trust—Jerry Marlar, CEO, Sulzer Biologica (formerly of Sulzer Orthopedics)

Jerry Marlar grew up in Oak Ridge, Tennessee where his father was a blue collar worker, working on the cyclotron project. Jerry said, "But I grew up in the Oak Ridge community where there were lots of smart folks. Most of my teachers in high school were Ph.D's." But before his family moved to Oak Ridge, his early schooling experiences were quite different. "I went to school in a one room school house. First grade. My aunt was the teacher." Through his schooling experiences, Jerry saw a range of opportunities and resources. Yet, Jerry felt that his work experiences were equally significant. "I think probably now as I reflect, one of the other shaping events, I have

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worked all my life. When I was in first grade I was chopping cotton.... I've worked forever." Jerry described what happened when he switched to a business major in college.

> Well, I thought I'd gone to heaven. ... It was creative, and you could think and use sixteen ways to get there, not just the roadway to get there. ... I got out of school in Marketing and Sales Management, asked my professors who are the best organizations to go with to learn, because I had this thought that the first half of my career I would be in an environment where I'm learning. So I started to look around and said who are the best trainers, and I was told Johnson & Johnson was a great trainer.

Jerry was already thinking about his entire career, allotting half of it to jobs that would build a repertoire of skills for the second half. B., the owner of a small orthopedic manufacturing company, offered him a job which he turned down to take the job at J&J. B. later asked Jerry to be the head of Sales and Marketing for the whole company.

> And I'll never forget this, making the decision....I said, "I made a conscious decision that if I come to the right manufacturing [company], and if after five years I have failed, I will learn more in that than staying with J&J five years, in the normal [course of events]. And so I made the commitment that I was going to have an opportunity to learn a whole lot more a lot faster..

Six years later, Jerry went to the president and told him that the company had a lot of problems.

> I went in to B. one day and said, ..., 'These are ten issues you're not dealing with and not getting it done. And they're not in my area of responsibility. I have a deal for you. I want you to make me your General Manager, give me six months to get these corrected or on the path to correction. At the end of six months if I haven't done it, you can fire me. If I have done it, I want my title changed to General Manager permanently, and I want you to double my salary.' He looked at me, he says, 'Well, I don't mind paying ten thousand a year, so what have I got to lose?' So he looked at me and he says, 'Okay, I'll do it.' ... And he gave it to me. At the end of six months I had accomplished all but one, and one he had just said, 'No you can't do.' ...So I became the General Manager, and really started a learning curve then.

The small orthopedic company of which he was General Manager was sold to a much larger multi-national organization. Jerry was asked to go to run a company in France. He agreed to do so under six conditions, one of which was that he be given an option to return to Memphis when his work was done in France. Five years later, the President of the company called and asked him to come to headquarters. They could see that he was quite creative and entrepreneurial. Jerry reminded him of his six conditions. They argued about it for about a year and then Jerry made a difficult decision.

> And I answered the six fundamental questions we all ask in every relationship: Why am I here? How am I doing, really? Why are we here? How are we doing, really? Are you committed to excellence? and Can I trust you? I answered the first five very, very favorably, and supportive, and thankful. I said all the things you helped me grow in, and learn, and do, and the experiences I've had, etc. But when I got to 'Can I trust you?' I said, 'I can't work for a corporation where I cannot trust the CEO to follow through with his personal commitments.' I had no choice but to resign.

Luckily, a head hunter had been trying to get him to be President of what was then Intermedics Orthopedics Inc so he took the position. He had already made up his mind that he wanted to implement learning organization principles. In 1992, Jerry Marlar became the CEO of the company and three months later, one-half of the executive team walked out of IOI on one afternoon and started a competing company. Marlar recounts this experience.

> Three months after I had been there I was going to visit a customer in Dallas.... I got back to my room that night, Thursday night, had a phone call from the VP of sales. He says, 'Jerry, we got a problem.' I said, 'Great, what is it?' This is about 10:30, 11:00 at night. 'I've just found out that our VP of finance, the VP of R & D, the VP of marketing, the Director of Quality, the Director of Regulatory Affairs, the two key managers in this area [sales] and three engineers are all going to leave the company and go start a competing one with the former President.' I said, 'Okay, here's what we do. Call a meeting at 10 o'clock in the morning. I'll call the VP of Personnel ... and tell her what the deal is. We'll do all the legal things right. And we'll bring them in and tell them that we appreciate the fact they're going to go start a new company, and we want to help them get started now. No problem. Let's round up your personal possessions and your belongings, and we'll pay you all the right severance pay, we'll do all the things we should do. And we'll escort them out. My wife and I are going to a retreat for the weekend. I will see you on Monday. We called it White Friday. We washed the slate clean and we started over. So now I knew I had a chance to build an organization and a team committed to the right things.

Marlar's clarity of vision about his own career also extended to a clarity of vision about where the organization had to go to be successful. Jerry attributes his personal faith experiences with providing him the confidence to set a course and head steadily toward it, even with turbulence. Marlar's life is a story that he more than fate is writing. His have been conscious, thoughtful choices, built on a foundation of faith in God, himself, and others; love of learning, a strong ethical core and explicit values, and a vision of a learning organization.

My role is to live it— Ralph Stayer, CEO, Johnsonville Sausage, Inc.

Growing up in Sheboygan, Wisconsin, the son of a successful owner of a small niche market sausage manufacturer, Ralph Stayer, Junior had a life course almost set for him from the cradle. When Ralph Stayer, Senior stepped down as President, he left behind a company with a small market but a solid reputation as the premier bratwurst maker in the region. His son built the organization into one that had an international reputation with substantial growth in market share. We wondered what early incidents led Ralph to walk this path. Linda Honold interviewed him and asked Ralph if he could think of anything in his childhood or his early adulthood that led to his perspective on leadership for a learning organization.

> No, there was none. That came from thinking it through… and a lot of reading. I have a basic observation on human beings. People really want to be great. I've been very good at, lucky, capable, or skilled, to take principles and to . . . connect them, and see how they might actually work in real life… I built a system where we all share in the profit. I incorporate everybody into this thing, then all of the sudden the problems aren't mine anymore. They belong to everyone. The first thing you need to look at is everybody wants to succeed. The second one is who owns the problem. As long as the problem rests with leadership, nobody else owns it. You need to build a system where you say I think you want to do a great job. I believe in you. I trust you. Let's define what a great job is. We work together and over a period of time ...we actually change the values in the company. But we didn't go to change the values, we went to create the values of — we work together, we trust each other — and then that became the norm. A good Catholic education brought me up to believe that other people are good people. I believe others are brought up the same way.

Like Marlar, Stayer built his vision on core values and principles that he also sees as connected to his faith. There is a strong sense in Stayer's perspective that the learning organization must be a collective journey. Linda described him as a risk taker and asked him where this came from.

> Part of my make-up comes from my parents. I'm the kid that figured out how to crawl out of his crib at a year-and-a-half. Well, they put chicken wire on top of my crib and everything in order to keep me in. When I was three I took a screw driver and my parents were gone for awhile and I took all the chairs apart. You know, those old chrome chairs with the plastic cushions. I had all the backs off and all the pieces laying on the floor. I was working on the table when my parents came in. Anyway, if your vision, your sense of what you want to accomplish, if your reason exceeds your needs, your concern about failure or your need for approval, you'll be a risk taker, period.

Linda asked Ralph to say how he saw his role.

> First of all my role, it's leadership. It's taking us to the next place. It's not managing what we've got. [It's] getting where we need to be. Visualizing it. That's the role I've created for myself … At the top the leadership is in perceiving the vision, listening, and getting people organized around it. How can I measure it? How can I touch it? I can feel it, how can I see it from my perspective because they all see differently?
>
> Execution is where all the excellence lies. After leadership the next thing is to stay with it. Stay with it. Work it. Go work it myself with a small group of people. Work it myself and make it work. You're right there. No broad proposals that I hand off, right down to the nitty gritty. As the leader that's one of my big jobs. And I did that back in the early 80s. I sat down with vice presidents. We went week after week after week after week, asking 'What are we doing? What are we doing? How's it working?' Working it, working it, working it, working it. It was continually asking, continually contributing my insights because I see stuff that most people don't see. That was the first team. We worked through it. What about? What about? What about? What about? With me as a catalyst. Me working with them, me right there with them, but them as owning and doing. It's always my job as the leader of this company to know what we want to get done. If I don't do that, I'm not doing my job.
>
> My role is to live it. It's to embody it. To get anybody to believe in it, I've got to embody it myself the best I can. Show that I'm willing to do it. That's part of my leadership. Exhibit the fact that you're living it. Exhibit the fact that you care about people. Care about other people's success. I can't talk about success here unless people believe that I care about their success, that I want them to succeed. And I think that pretty much people think that I want them to succeed. That I'm interested in them and I'm proud of them and I'm happy for them when they succeed.

Whether his willingness to take risks came from early conditioning or a natural precocity is hard to say, but it would appear that the most important factor is an inner vision of what he wanted to accomplish. This vision also permeates his understanding of his leadership role. His is a personal vision, and one that is at the lived level, hands on, with sleeves rolled up, working side by side with the people who will enact the vision. Stayer emphasizes the persistence and conviction that people can succeed that are necessary to make this work. His insight that people need to understand and come to their own meaning of the vision is critical. Without this perspective, it would be easier to simply command that people enact his vision.

The ultimate vision: Business results-- Pete Cistaro,Vice-President of Distribution, PSE&G

Judy O'Neil interviewed Pete Cistaro and asked him to tell how he came to his current role as a leader of a learning organization. Pete has worked his whole career at PSE&G. Although educated as an engineer, his interest from the beginning was to work with people. Like Marlar, he made choices about the direction of his career. His early experience with the company taught him lessons about the best way to work with people.

> Actually this is my thirtieth year with PSE&G. So I started here right out of school. I have an engineering degree. I knew when I went to engineering school that I really did not want to be an engineer... One of the things that drew me to this company was the fact that they offered more of a managerial training program. ... you'd be placed into a management role relatively early on in your career. ...
>
> In 1972 I was promoted to....District Superintendent, which is equivalent to an Area Manager today. And I wasn't even twenty-six. ... you've got to see yourself as a 26-year-old person dealing with people who were in their forties, fifties ...here you are the young kid telling these other people what to do. And that's why I guess I learned rather quickly that I wasn't going to tell them what to do... but I was going to try to get from them their experience, their capabilities, and sort of get them to use it better, and work harder, and work together to make that happen.

Pete saw the importance of working together, empowering people, achieving success together—rather than the command and control hierarchy common in the company. This learning repeated itself time and time again.

> Then I was asked to ... head up the Labor Relations on the electric side of the business, which was a completely different thing for me. In fact, when I was asked to do that my immediate reaction was 'I don't know anything about the electric side of the business. How can I sit there and be the spokesperson and deal across the table?' And the answer was 'well you know enough about the agreement, you know enough about people, you handle yourself to the point where we believe that people have some trust and confidence in your capabilities, and don't worry about the technical stuff. That'll handle itself.' So, again, I think this effort of 'I don't know all the details. I'm not the expert here, so I need to rely upon other people to help me to get my job done' comes out again. ...

In addition to leading through working with others, Pete has other explicit views of his leadership role. These views are similar to other learning organization leaders—a focus on vision, the means to transmit that vision, and ways to achieve that vision.

> I think a good leader has to first of all have a vision of what they see and where they want to bring the organization. I don't think that the organization can do that necessarily by a vote, or by some referendum, or by multiple choice tests. I think there needs to be some vision, and then that vision needs to be articulated so that you can get more and more people engaged to a) understand it, b) recognize that it's the right thing to do, and c) that they want to support it.

Probably one of the key phrases for Pete as he talks about his leadership role is "the ultimate vision, which is the business results." Pete believes you can achieve the right results through coaching but you can actually get in the way of the right results with behavior that is more directive. Cistaro also underscores a focus on people.

The Facilitators: Linda, Renee, and Bill

We also interviewed three individuals who were organization developers. We asked each of them to share with us incidents in their lives that they thought were critical in shaping their current thinking about how to create learning organizations.

We've only just begun-- *Linda Honold, formerly with Johnsonville Sausage, Inc.*

Sitting in Linda Honold's apartment overlooking the lake in Milwaukee, she talked about how she came to value learning. It really began at the age of 10 when a ruptured appendix had her flat on her back for three weeks during which she read constantly. Her mother encouraged her to read. She deeply valued education and instilled in Linda a thirst for learning. But most significant to Linda's work at Johnsonville was probably what happened later when she was in high school:

> When I was in the 9th grade, friends of mine broke into a house and stole some collectible guns. They were going to run away. I skipped school to talk them out of it and got caught and was given detention for missing two periods. I told my mother that I did not want to go to a school where you were given detention for helping your friends. Sister Mary Jo Donaldson of St. Bede's Priory had a vision of a school based on Summerhill. My mother had heard of it and so I investigated it and transferred to this private Catholic high school in Eau Claire, Wisconsin. This is how I ended up in a self-managed learning high school. At this school, I had to contract with a faculty member for what I would do. Each person had a mentor. You could be creative. I created a one-on-one course with Sister Mary Jo on Russian History and Russian Literature.

In many ways St. Bede's Priory was a visible model of how self-directed learning and empowerment could work. Later, after receiving her undergraduate degree, Linda worked for a printing company. She hated going to work every morning. Everyone else hated it too. She decided that there was something morally wrong with people spending one fourth of their time doing something that they hated to do. This led her to enroll in graduate school where she had several labor relations courses. Training in Industrial Relations inspired a decision to work from within an organization to make change.

Linda answered an ad for a Personal Development Coordinator in a project sponsored by the Joint Training Partnership Act that led to another significant learning experience. "The job was to work among Hmong refugees. I helped them get basic job skills, advocated for them with employers, then provided job support once they were employed." The job with refugees involved working with the whole person and seeing that, despite great disadvantage, these individuals could find and maintain employment with appropriate help. Later, at Johnsonville, Linda saw parallels in the lives of some employees who had stopped learning after they left grade school. Linda saw that opportunity and support could turn this around.

When Linda first applied to work at Johnsonville Foods, they hired another person. When this person left on maternity leave, Linda called Johnsonville Foods and inquired into the position:

> I called and said that I was still interested. The job I was eventually hired to do was defined as 'to get people in a learning mode.' This sounded fun, creative, and exactly what I ought to do at this point in my life. I started educating myself on what this meant. I read the traditional learning literature. I ... decided that it did not fit. Then I read the career development literature and felt that this fit, but not rigidly. The key was making people responsible for their own development. I saw my job as creating opportunities and systems for them to learn. No one had the right to play God.

After five years working inside Johnsonville, Linda left Johnsonville to form her own consulting business. She continued to work as a consultant to Johnsonville as well. Linda said, "John Stuart Mill said that learning and change are somewhat synonymous. Get them learning, they will be more open to change." Linda's life history is clearly that of a person who has sought opportunities to learn and to change.

More will always be revealed---*Renee Rogers, Director of Human Resources, Sulzer Orthopedics, Inc.*

Renee Rogers of Sulzer Orthopedics, Inc., describes the incidents that she felt most significantly shaped her perspective. Renee recalled an experience from the 14 months she spent traveling in India in the late 1970's.

> While I was in Calcutta, I stayed in the Salvation Army hostel. Each evening the rickshaw wallahs would park their rickshaws in a circle and all their families would form a temporary village. One night when we came back to the hostel, the rickshaw families were having a grand celebration. I still remember a baby sitting in a window sill, laughing outloud with her eyes shining. Since this was not usual, we asked someone on the street what was happening and they explained that one of the rickshaw wallahs had been given some chicken feet and the families were happily preparing a feast for that evening's supper. I left this scene and went into a three-week depression.

Renee was disoriented by the discrepancy between her view of life and theirs. She began to develop a nonjudgmental perspective of the "other." Renee reflected:

> Gradually, as many people do who stay in India long enough, I began to integrate this experience. I developed a deep sense of acceptance and an understanding that my judgments, good or bad, were inevitably rooted in my own experience. I began to understand that it didn't work for me to judge the quality

> of others happiness or pain. In fact during those three weeks, I was the one who was unhappy, not the child whose eyes I still remember. I often think of this experience in my corporate life today. I think how often people in organizations judge events and situations in light of their own experience; how there really are people who make $100,000+ a year and still feel underpaid and undervalued; how life satisfaction and quality of experience is a relative phenomenon that I'm better off not judging — only observing.

Renee's experiences continued to broaden her understanding of people and systems. When she was in graduate school, she did an internship with American Airlines in 1985. She worked as a curriculum specialist with a Vice President on a new five-week international security training program. It was piloted with 10 Security Managers in Frankfurt, Germany. Renee attended the course, took notes, and translated it into training materials and a train-the-trainer program so that they could implement it internally. Renee describes her interaction with the consulting group, and the insights she gained into what is involved in large-scale change:

> The consultants who delivered the training were career Israeli El Al security employees who sometimes had problems with delivering the course in English. Because of my ESL background, I began working regularly with the consultants preparing for the classes each day. Because this was the first major contract for them, they really were designing the program as they went along. In fact, the consultants had deep knowledge of their subject, but I learned that not all high-powered consultants have their interventions all planned out in advance. . . . they were good at co-designing with the client, adapting their expert knowledge to the particular situation of the client. This was also my first experience to support a large-scale, strategic program . . . so I was able to see the process as it unfolded.

Renee felt that she was not only learning what she had been trained to do, but also how to adapt it to fit the circumstances and the exigencies of a particular situation. She was also working with increasingly larger systems.

Renee's first OD job was with a municipal public utility, where the roles of employee relations and OD were intertwined. She later responded to an advertisement for a position at Intermedics Orthopedics and was hired. Renee found her first assignment there to be a critical learning experience. She explains:

> My first assignment at IOI was to develop and implement a team training course for newly formed cross-functional product teams. I did this in the first year and implemented the training with 80+ technical/professional employees. By the second training, we had worked out all the bugs so the training was well received. However, what the training uncovered were numerous, significant system problems that prevented employees from applying the team skills being taught. The young organization lacked defined systems and processes for cross-functional product development and management. However, this was more than we were able to address in any meaningful way with a training intervention. So I reframed the work as organizational diagnosis where we were able to document many problems but were not able to solve them immediately.

The progression in this incident is worth noting. In the beginning, the assignment was to develop a course. By thinking more systemically and incorporating the knowledge she was gaining from employees in trying to implement the course, she was able to transform the assignment into an organizational diagnosis. But she was also not in a position to take action on what she had learned. Rather, the eight supervisors were. By later involving them in teaching courses, they were able to see for themselves that at least one significant barrier to implementing these team and quality concepts was the fact that workers lacked certain basic literacy skills. With their support, Renee was able to move from teaching a course on teaming to an organization-wide basic skills intervention.

When Renee had been at IOI for one year, Jerry Marlar, the new President, transformed her role from training to Organization Development. He was initiating a company-wide visioning process and named her the internal point person in this endeavor. In this role she participated in the many sessions conducted at all levels of the organization, from the initial meetings with the executives, to the session with middle managers and then the joint total management meeting, and finally all the sessions with employees. Most recently, Renee has been promoted to Vice President of Human Resources. Her life history well illustrates the way in which working with increasingly larger systems helps a facilitator develop the skills needed for the whole systems change of creating a learning organization.

Ask me anything, I'll tell you a story ***Gardner, Director of Corporate Learning and Organization Development, Advanced Micro Devices***

Advanced Micro Devices are making strides in the direction of becoming a learning organization. One key figure in this work is the Director of Corporate Learning and Organization Development, Bill Gardner. We asked Bill to think back on his life, from early family experiences to more recent experiences to identify those that had the most significant impact on how he now thinks about his role as a facilitator of learning organizations. He did not find it easy to come up with a single incident. He spoke instead of the cumulative impact of growing up as an invisible minority. He sees this as central to his current role as a support staff. This enables him to raise questions from a position of being both on the inside and the outside at the same time. Bill explains:

> I think back to a time when, ... I must have been maybe eleven or twelve. My father was an outstanding cook.. . . my family or groups of people would get together at our house, and my father would cook these incredible things out in the yard.... And typically the men would stand around outside and, even though liquor was not legal in Mississippi, they'd usually have a few drinks, and the women would all be inside making potato salad, or something. And the children were sort of relegated to no person's land... But there was this real desire in all of the boys in the family to be accepted into that circle, standing outside around the barbecue pit laughing and talking about whatever they were talking about.
>
> And I vividly remember the first time that I was not run out of that ring. We had this little apartment behind our house, and that's where they would go and mix these cocktails, or whatever. And we would walk in and they would order us out. But I remember the time that I got to stay. And so I was kind of overwhelmed with I'm now accepted in this circle. I am a man. I probably didn't say that in my head, but I remember intensely the feelings of they're not running me out. ... I may have combined a whole lot of incidents together, but I think the very first time that I was in there they were talking about a friend of my older sister's who was queer. And they were laughing about it and everything. And I had this distinct, sort of schizophrenic feeling that I can be here, and I can be accepted here, but I'm not really. So I have to pay attention. I have to be hyper-vigilant here to not let them know that I'm not one of them or I won't be able to be in here. But, maybe, there's something I could do to get them to look at things differently. The truth, I guess, as I knew it.

Bill struggled with wanting to stand up for his sister's friend because he knew something of what she might be feeling. But he also wanted to stay in the circle and be accepted. Bill related these feelings to situations in which he finds himself in the company where he has to be able to take both sides of an issue:

> And I think about that a lot, because I have that feeling often when.....the people that I work with, I'm never a part of them. You know? They are either senior management, or executives, or something. So part of my role there is to not keep reminding them that I'm not one of them, but to help them get comfortable enough with me so that when I call up representing whoever it is I'm representing, be it the employees or just somebody who's not an executive, that they can hear that and not discount it like they discounted it other times. With this values work that I've been doing several times I've said, 'Okay. I'd like to sit down here for just a minute and take my facilitator cap off and speak to you as an employee of the company. But also as an employee of the company who did focus groups, and who saw the data from focus groups. Everyone in this room is a Director or a Vice-President, except for me. And you seem to keep forgetting that when we did focus groups, the focus groups that were done of Directors and VP agreed with what you're saying right now, but the employees didn't. And you keep speaking as an employee of the company, which you are, but you're not representative of the vast majority of employees.' And they'll hear that, and they saw the data just like I saw it. ...
>
> I've thought a lot that if I were not gay, I wouldn't be near as effective as I am in corporate America. You know, which is just a complete contradiction, even as I say it, but I wouldn't be. I mean, well certainly all the diversity stuff that I've done, but even separate and apart from that, all the other stuff is always having my head sort of in two places.

Like Renee, Bill draws power from having a different perspective, being able to see things that others do not. His experience of cultural separateness made it possible for him to both see from within the circle and without. This stance, somewhat like that of an anthropologist viewing oneself and one's organization almost as an alien culture, enables the learning organization facilitator to see what others see while being able to gently help those inside the organization see it too by speaking in their dialect.

A final characteristic of Bill's is his storytelling ability. Through stories, he is able to capture attention and direct change more subtly. Bill was surprised at the ease with which he tells stories, and the value that these stories have in helping people to make sense of things. With all of the different change initiatives going on, Bill had to switch back and forth frequently between five or six different projects in any given day. Stories carried the thread between meetings that might take place months apart. Bill used stories to bring himself and others up-to-date:

> And when I would come into a meeting I seemed to be the only person that remembered what happened the time before. ... And so I'd draw pictures all during the meeting. I'd draw little icons to capture what's going on, and write little notes down. And I can pick out a couple of pages and look at it and I remember what's

> happened. But I found myself more and more going in to start off a meeting on some task force, and I'd say, 'Okay. Now, let's review what's happened up until this point.' ...I just tell a story. ... And it helps now and then to get the thread and go from there, instead of having to go back and reconnect.
>
> So now we're starting to draw . . . like do the icons, do a little road map. And I usually come in and put the road map up, and people just kind of look at it. I mean, I have one that I can do in, I think, thirteen minutes. Thirteen minutes for the entire two and a half years of the vision, mission, and values process. . . . The little file cabinet exploding with twenty-five archival analyses But are there critical incidents that I could identify with me telling stories? Heavens no! My whole life, say anything, I'll tell you a story about it.

Bill's stories capture the organizational memory — and he also triggers memories with personal images and icons. As his family did before him at Christmas, he carries on the organizational change tradition through his stories.

Implications for Leaders and Facilitators of Learning Organizations

We have seen that those who facilitate these initiatives often have a vision of the future that stands against the status quo. Leaders are pivotal to translating learning into organizational results, while learning organization facilitators are pivotal to architecting the structures that will enable learning to occur. Leaders of learning organizations must transition from old notions of leadership to new roles, and bring a long term vision of what the organization might be coupled with dogged persistence to work with people to understand and to bring about that vision. These leaders also show that a force of character, a personality that is organized and driven by values is essential. Facilitators and leaders have a clear vision of themselves and how they want to work within the system. They like to see people grow and develop, so that they too can speak their vision for themselves. They are system thinkers who see themselves as part of a large, complex, interactive universe. They carry a sense of the organizational memory---and of the importance of embedding knowledge to stablilize a change effort. They recognize that meaning is constructed –more by what we do than what we say

From a theoretical perspective, the life histories of individuals help us identify critical experiences that shape a learning organization philosophy and perspective. While we cannot prescribe a life experience, we can help others draw meaning from their experiences and understand how these experiences frame how they now view learning and change. The critical connection between experience and visions—both enabling and limiting visions—is underscored in these stories.

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Where Have All the Young Ones Gone? An Analysis of the Graduates of an Human Resource Development Program

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The faculty of an human resource development program conducted a survey of graduates between 1998 and 1999. Forty graduates responded. Over 90% are working in HRD or AE or a related field. They indicated the program enabled them to adequately carry out their responsibilities. They identified areas of weakness, now being addressed. They also identified key competencies needed by graduates to be effective. A number of recommendations were given for other studies and for the program.

Keywords: Performance Measurement, Graduate Program Evaluation, Doctoral and Masters Students

Graduate programs in Human Resource Development (HRD) and Adult Education (AE) have experienced continuous growth over the past half century. The American Society for Training and Development (1999) has identified over 50 universities in Canada and the U. S. offering graduate programs in HRD, and the Commission of Professors of Adult Education (1999) lists over 60 universities offering AE programs. Thus, many graduates have received degrees in HRD and AE, and are engaged in a variety of occupations and professions. An important question to be asked is how well do we know what occupations and professions HRD graduates are engaged in, and equally important, to what degree did their graduate studies and degree contribute to their profession?

This was the goal of the study conducted by the Adult Education and Human Resource Development (AE/HRD) program at a major university in Southeast United States. The purpose was to determine the present positions and roles of graduates of the AE/HRD program, to determine the degree of impact the program had upon their professional life, and to seek their opinions and perceptions about the program. Two related purposes were to review the program in light of the graduates' comments, and to advise current students of actual positions and roles held by graduates of the program. This was the first such study conducted of this program, and the questionnaire and process would be of benefit to other HRD and/or AE programs.

The results of this also added to the knowledge base regarding professional continuing education in general, and AE/HRD graduate programs in particular. It has already provided the participating faculty and their students better information for academic and career decisions.

Theoretical Framework

The study is based on the theoretical frameworks in three areas: career counseling and development, total quality and continuous improvement, and the more recent development of performance-based learning. Career counseling and development has a long history of research (Ashar & Skenes, 1993; Vanderpool & Brown, 1994; Naretto, 1995, Evans, Forney, & Guido-DiBrito, 1998, Pascarella, & Terenzini, (1998), but relatively little at the graduate level and the assessment of graduate education as perceived by alumni.

Similarly, an increasing amount of research has assessed the impact of total quality and continuous improvement, with mixed results it should be noted (Lewis & Smith, 1994; Arcaro, J. S., (1995), Petrick & Furr (1995)). Similar to the research in career counseling and development, the assessment of the quality of education in general and graduate education in particular has received relatively minimal attention.

Finally, the transition from developmental to performance-based learning is presently occurring, with the theoretical framework still being developed. Research is mostly applied and within corporate and government environments (Brinkerhoff & Gill, 1994; Robinson & Robinson 1995; Swanson, & Holton, (1999); Gilley, Boughton, & Maycunich, 1999), with very few studies in higher education. Thus, this study will contribute to the growing research in these three respective areas.

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Research Questions and Hypotheses

Two research questions and related hypotheses guided the study:

Q_1 - How many of the alumni of the AE/HRD graduate program are now professionally engaged in Human Resource Development or Adult Education?

  H_1 - A majority of the responding graduates are working in AE/HRD or related positions and fields.

Q_2 - What are the perceptions of alumni about the program?

  H_2 - A majority of the graduates perceive the program to be beneficial in their professional growth.

Research Design

A survey was sent to 179 people who have graduated over the past ten years (1989 -1999) from an AE/HRD graduate program (two masters degrees and a doctoral degree) in a major urban university in Southeastern United States. The survey was conducted as part of the renewal of regional accreditation of the university. The College of Education, where the AE/HRD program is housed, urged all faculty to assess the impact of their programs. The AE/HRD faculty used this opportunity to seek specific information from the graduates regarding their present lives and their perceptions about the AE/HRD program.

The questionnaire was derived from a general questionnaire the College of Education (COE) developed to solicit feedback from all graduates on the impact of the degree programs (undergraduate and graduate) had upon their present work and profession. The AE/HRD faculty used some of the items from the COE questionnaire, and added additional questions specifically addressing the AE/HRD program. The questionnaire was divided into three parts: (1) a preference rating of 23 outcomes of the graduate program and a request to identify the strongest and weakest aspects of the program; (2) the identification of the competencies a person must have when completing the AE/HRD program to be a successful practitioner and professional in HRD or AE; and (3) their current position and future plans, and an optional opportunity to write a brief guided personal autobiography of their lives since completing their program, giving a summary of both their professional and personal lives. This paper presents the data and conclusions from parts one and two.

The analysis of the resulting data consisted of both quantitative and qualitative processes. The data from part one were tabulated, with a comparative analysis conducted based on degree received and year graduated (e.g., do masters graduates perceive the program differently than doctoral graduates; are there any differences in the responses from recent graduates, the last two years, and those who graduated eight to ten years ago?) A content analysis was conducted of the data from part two, with the identification of the strongest and weakest areas, and the ranking of the recommended competencies.

Findings and Discussion

Response Rate.

A total of 40 responses were received. As a quantitative measure, the response rate was at the minimal level of acceptance (22%). Therefore, extrapolation and generalization to the total population have been conservatively applied, as have the recommendations at the end of this paper. As this is the first survey ever conducted, it is the intent to continue surveying the graduates of the program at least bi-annually (see recommendations). The responses received in this survey, discussed below, have warranted further review and consideration in future planning. Such data should be periodically sought in future surveys.

Population.

The graduates responding were from all three degree programs : the doctoral program (EdD) in Adult Education and Human and Human Resource Development (n = 12), and the two masters (M.S.) programs in Human Resource Development (n = 8), and M.S. in Adult Education (n = 19). One graduate did not give a degree, but did complete the survey, and the data were included. The higher number of Adult Education graduates were not all adult education majors, as only one degree, M.S. in Adult Education, was offered up to Spring 1994, with an emphasis in HRD or

AE.

The graduates were asked to give their present occupation, indicating if they were in human resource development, adult education, a related field, or not in any of these fields. All but one (98%) responded. Table 1 summarizes the positions by degree and year. Over 90 % are either working in AE or HRD (27, 68%), or in a related field (9, 23%).

Table 1. Present Positions of Graduates by Degree and Year of Graduation[*] (N = 39)

Working in Ad. Ed. or HRD (N = 27)	**Working in a related field (e.g., Personnel Admin./ HRM, Management) but not in AE/HRD (N = 9)**
Masters, Adult Education (N = 12)[**] 1989 Occupational Therapist - Academic Fieldwork Coordinator 1991 Clinical Educator 1992 Director of Organization Development 1992 Adjunct Occupational Therapist Lecturer 1992 Employee Development/Compensation Mgr. 1993 Instructional Designer 1993 Public Programs Manager 1995 Multimedia Training Specialist 1996 Educational Supervisor 1996 Nurse Manager - Staff assessment/development and training new employees 1996 Vice President [management development company] 1996 Director of Training [manufacturing and service company] **Masters, Human Resource Development (N = 6)** 1997 Senior Facilitator [organizational and management consulting company] 1998 Instructor 1998 Senior Research Associate/Lab coordinator 1998 Instructor / Curriculum Development 1998 Program Manager, Organizational Leadership and Development [medical center] 1999 Staff Development Specialist **Doctorate, AE/HRD (N = 9)** 1989 Director, Continuing Education at [private university] 1990 Director of Training 1996 Director International Student Systems and VA Students. A full professor (by rank) at [community college]. 1996 President - Consulting Co. 1996 Assistant Professor - HRD Program 1997 Research faculty at [public university] and faculty member, Department of Transportation 1997 Director of Education and Training 1998 Curriculum Development Specialist 1999 Assistant Principal, Adult Education Center at [school district]	**Masters, Adult Education (N = 5)** 1992 Organization Development 1993 Human Resource Manager 1992 Campus President [private university] 1994 Director - Office of Quality Management 1998 Human Resource Manager **Masters, Human Resource Development (N = 3)** 1994 Director of Human Resources 1998 Senior Research Associate, Clinical Coordinator [medical center] (No year given) District Office Supervisor for a State agency **Doctorate, AE/HRD (N = 1)** 1997 Director of Student Activities **Not currently working in Ad. Ed., HRD, or any related field (N = 3)** **Masters, Adult Education (N = 2)** 1990 Trauma Research Nurse, [regional hospital] 1995 Director of Educational Technology and Lecturer, Computer Science Dept., [public university] **Masters, Human Resource Development** (None) **Doctorate, AE/HRD (N = 1)** 1991 Adult Nurse Practitioner (occasionally involved in staff education or community education projects)

[*] Place of employment was not requested, but is given, in generic terms, if stated in the questionnaire.

[**] Only one degree, M.S. in Adult Education, was offered up to Spring 1994 , with a major in HRD or AE. As of

Fall, 1994, an M. S. in AE and an M. S. in HRD was offered.

Survey Results.

Assessment of the Program

The graduates were asked in Part One to indicate their level of agreement (from strongly agree to strongly disagree) to 23 statements regarding their use of what they learned in their graduate program (see Table 2). The statements addressed four educational areas: knowledge (e.g., "Understand the ways that knowledge in my field is organized"); skills (e.g., "Use a variety of instructional strategies for diverse populations"); attitudes (e.g., "Engage in reflective research inquiry", and "Be disposed toward employing critical thinking strategies in my professional roles"); and faculty and scheduling (e.g., "I found my professors to be competent in the subject matter they taught" and "Regarding the scheduling and sequencing of the courses, I got the courses I needed when I needed them").

The grand mean of all the responses was 4.36, with 5.00 = strongly agree and 1.00 = strongly disagree. Thus, the graduates generally agreed or strongly agreed that the knowledge, skills, and attitudes taught in their graduate program enabled them to adequately carry out their present roles and responsibilities. Two clusters of responses were below the grand mean and should be noted. First, an average of 12 % of the respondents indicated they disagreed or were uncertain that the skills received in their program -- use instructional technologies to facilitate teaching and learning, and use a variety of instructional strategies for diverse populations -- were adequate. This was further clarified in later, short answer questions that are discussed in the next section..

In a second cluster, an average of 25 % of the graduates indicated they disagreed or were uncertain that specific attitudinal areas -- interpret philosophical differences in educational thought, engage in reflective research inquiry, influence community political efforts, and being disposed toward professional leadership roles, and being disposed toward scholarly activity -- were adequately developed. As indicated above, these response statements were from the college-wide survey sent to all graduates, and, in retrospect, these specific items did not clearly apply to the abilities emphasized in the graduate program. The graduates answered the questions honestly; however, with the exception of reflective research (Table 1, item 14), these attitudes are not specifically presented in the program.

The graduates were asked to give recommendations to improve the offering of courses. The 20 (50%) responding collectively recommended more application, or "hands on" experiences, and greater coordination and scheduling of courses. This was recommended by masters and doctoral graduates, and younger and older graduates.

Two final program assessments questions asked the graduates to identify, in light of what they are doing now, the strongest and weakest areas of their graduate program. It appears that they took advantage of this opportunity to express their opinions, as 37 (93%) commented on the strengths of the program, and 27 (68%) on the weaknesses. Three major themes were identified as the program's strength: instructional design and development, adult learning and learning theory, and the development and management of AE and HRD programs. These themes reinforce the two major components of the program, educational (instructional) development, and organizational development. The relative weaknesses of the program identified by the graduates were a lack of specific applications (mentioned above), educational/instructional technology, and applied research. The ability to integrate specific applications is likely to be a continuing problem, as the diversity of the field contributes to the problem of giving appropriate examples and case studies. The emphasis of HRD is learning within organizations, while the emphasis of AE is learning by individuals. Programmatically AE primarily takes place in the public sector, more specifically the educational sector, while HRD applies to the public and private sector. HRD in the public sector differs in many ways than HRD in the private sector, however.

The lack of educational technology reflects exponential changes of technology the over the past ten years that results in early graduates now needing skills not delivered when they were students. It also reflects the continuing development of the competencies of the faculty, and hardware and system, all of which are being addressed through further technical training and systems upgrading, and new courses in computer and web-based instruction.

Finally, the weakness in applied research is valid for two reasons. The first reason is tied with the first weakness: applied research is best understood when it can be applied within the context of the learner's environment (work or profession). The second reason is based on a persistent problem of the program being housed in the College of Education. The faculty receive continual complaints about non-AE/HRD courses – courses in research, and educational philosophy and psychology required of all graduate students -- being too oriented to education in general and K-12 education in particular. The AE/HRD faculty work with these faculty, but this will remain a continuing problem as long as the universities and accreditation standards require demonstrated competencies in these areas, and that they be taught by faculty with appropriate training, albeit in primarily educational contexts.

Table 2. Summary N (%) of Responses to Impact of the AE/HRD Graduate Program (N = 40)

The education I received in my AE/HRD program in the College of Education enabled me to:	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Mean
1. Understand the ways that knowledge in my field is organized.	21 (53)	18 (45)	1 (3)	0	0	4.43
2. Understand the subject matter in my field in depth.	19 (48)	16 (40)	3 (9)	3 (9)	0	4.35
3. Understand the moral and ethical questions related to specific subject matter content.	16 (40)	18 (45)	6 (15)	0	0	4.25
4. Understand how people develop and learn.	28 (70)	11 (28)	0	1 (3)	0	4.65
5. Understand how to convey and reveal subject matter to learners.	28 (70)	11 (28)	0	0	1 (3)	4.63
6. Understand the (political, social, cultural, philosophical) contexts in which adult learning takes place.	20 (50)	19 (48)	0	0	1 (3)	4.43
7. Engage in the pursuit of new knowledge in my field.	21 (53)	17 (43)	1 (3)	1 (3)	0	4.45
8. Use instructional technologies to facilitate teaching and learning.	18 (45)	14 (35)	3 (8)	5 (12)	0	4.13
9. Use a variety of instructional strategies for diverse populations.	19 (48)	16 (40)	3 (8)	2 (5)	0	4.30
10. Use a variety of methods in my subject to enrich learning.	21 (53)	15 (38)	2 (5)	2 (5)	0	4.38
11. Draw on my knowledge of human development, subject matter and instruction, and my understanding of students to make principled judgements about sound practice.	24 (60)	14 (35)	1 (3)	1 (3)	0	4.53
12. Interpret philosophical differences in educational thought.	12 (30)	21 (53)	6 (15)	1(3)	0	4.10
13. Shape my own professional and curricular values.	23 (58)	17 (43)	0	0	0	4.58
14. Engage in reflective research inquiry.	18 (45)	15 (38)	5 (12)	2 (5)	0	4.23
15. Influence community political efforts.	9 (23)	10 (25)	13 (33)	7 (17)	0	3.55
16. Be disposed toward being in leadership roles in professional organizations.	12 (30)	16 (40)	9 (22)	3 (8)	0	3.93
17. Be disposed toward being engaged in scholarly activities.	12 (30)	22 (55)	6 (15)	0	0	4.15
18. Be disposed toward working collaboratively and creatively with learners.	25 (63)	13 (33)	1 (3)	1 (3)	0	4.85
19. Be disposed toward employing critical thinking strategies in my professional roles.	22 (55)	17 (43)	1 (3)	0	0	4.53
20. I found my professors to be competent in the subject matter they taught.	25 (63)	15 (38)	0	0	0	4.63
21 .I found my professors to professionally represent the field.	24 (60)	14 (35)	1 (3)	0	1 (3)	4.50
22. Regarding the scheduling and sequencing of the courses, I got the courses I needed when I needed them.	22 (55)	17 (43)	0	0	1 (3)	4.48
23. (For doctoral graduates) I found my professors to adequately carry out their program and dissertation responsibilities. (N = 13)	6 (46)	5 (39)	2 (15)	0	0	4.31

Grand Mean = 4.36

Recommendations for improving the program

The graduates were asked in Part Two to reflect on the program itself and identify the competencies a person must have when completing their AE or HRD program in order to be a successful practitioner and professional in the field. They were asked to identify and rank the top five competencies. The response to this request was high: 34 (85%) graduates listed 170 competencies. The rankings varied: what were highly ranked competencies of one graduate may be lower ranked by another. For some, the competencies listed reflected what they were dealing with in their present work, e.g., graduates are being given greater human resource responsibilities and now are seeing the need for greater understanding of human resource management (HRM), and some are dealing with leadership and management issues and would like to have more competence in gaining support from leadership.

Table 2 presents a representative selection of competency lists by degree and the year of graduation, showing the similarity of responses regardless of their degree or when they graduated. The collective answers to this question affirmed the responses discussed in *Part One*. The graduates believe the three competencies (i.e., most often listed as the first or second competency) persons coming out of an AE/HRD program must have are (1) educational/instructional development ("needs/tasks analysis," "curriculum design," "ADDIE (analysis, design, development, implementation, evaluation) principles"); (2) adult learning ("understand how people learn," "adult teaching and learning," "adult education techniques for learning") and (3) organizational development ("ability to recognize the environment for education," "leadership and management skills," "organizational consultation"). Other competencies identified in the top five were history and current trends in AE/HRD, critical thinking strategies, platform/presentation skills, principles of total quality management (TQM), delivery in multi-formats (internet, computer, CD ROM), and working with and in teams.

Table 3.
Selected List of Competencies by Degree, and Year of Graduation.

Degree, Year Received & Ranked Competencies

Masters, Adult Education*

1990
- 1 Communication skills
- 2 Adult learning principles
- 3 Adult teaching principles
- 4 Development coordination and implementation of programs
- 5 Data collection and statistical analysis

1996
- 1 Ramification surrounding adult learning
- 2 Community resources
- 3 Program management
- 4 Career development
- 5 Presentations
- 6

Masters, Human Resource Development*

1998
- 1 Organizational and programmatical understanding of process
- 2 ADDIE [analysis, design, development, implementation, evaluation] principles
- 3 Management process and principles
- 4 Good computer skills
- 5 Understanding research process

1999
- 1 Assessing and evaluating needs
- 2 Designing a course synapsis
- 3 Developing courses in many formats - video, lecture, CD ROM
- 4 Performance improvement and writing performance based learning objectives

Doctorate, Adult Education and Human Resource Development

1991
- 1 Ability to design, implement and evaluate adult education programs
- 2 Ability to design, implement, and evaluate educational research.
- 3 Ability to use technology in learning, i.e., distance learning.
- 4 Ability to evaluate commercial educational products and consult with organization to elicit change through adult education.
- 5 Competency in writing grant proposals/ writing for publications.

1998
- 1 Adult ed techniques for learning
- 2 Human resource development practices, principles & techniques
- 3 Management of HRD
- 4 Strong critical thinking for new approaches in the field of AE/HRD
- 5 Research

* Only one degree, M.S. in Adult Education, was offered up to Spring 1994, with a major in HRD or AE. As of Fall, 1994, an M. S. in AE and an M. S. in HRD was offered.

Conclusions and Recommendations

The study was conducted to determine the occupational/professional life of persons who graduated between 1989 and 1999 from a graduate (masters and doctorate) Adult Education and Human Resource Development program, and to seek their opinions and perceptions about the program. Forty graduates responded by completing a questionnaire that sought their opinions on specific outcomes, the strengths and weaknesses of the program, and the competencies they believe are needed to effectively work in HRD and AE. The study was guided by two research questions and hypotheses. The first was, how many of the alumni of the AE/HRD graduate program are now professionally engaged in HRD or AE? (H_1. A majority of the responding graduates are working in AE/HRD or related positions and fields.) As presented in Table 1, 36 (93%) of the graduate are either working in AE or HRD (27, 68%), or in a related field (9, 23%). Thus, the first question was answered affirmatively, and the hypothesis H_1 can be accepted.

The second research question was, what are the perceptions of alumni about the program? (H2, A majority of the graduates perceive the program to be beneficial in their professional growth.) As presented in Table 2, the grand mean if the responses to 23 statements on their use of what they learned in their graduate program was 4.36 (5 = strongly agree). Thus, the second question was also answered affirmatively, and the hypothesis accepted. It should be noted, however, that the mean for 10 of the 23 statements was below the grand means (range 4.35 - 3.55), and, as present above, clustered around two areas - skills in instructional technology and strategy, and development of philosophical, professional, and scholarly attitudes. In other words, while the program was found to be high beneficial, there are areas that warrant further development.

The study further identified key knowledge, skills, and abilities needed in the field by asking the graduates to list the top five competencies they believe are needed in HRD and AE. As presented in the representative competencies in Table 3, the three primary competencies, or more accurately, the competency groups were educational/instructional development, adult learning, and organizational development. These also are the primary areas of development of the AE/HRD program. Thus, the responses can be interpreted as predictable, or the program addresses the needed competencies as indicated by professional practitioners. Their being graduates of the program, but also successful professional leaders and practitioners, it would be acceptable to concluded that both are interpretations are correct.

From this study the following seven recommendations can be made. The first are four recommendations pertaining to the study and its further followed by three recommendations specific to the program.

First, this is the first study of the program. While a exhaustive search of AE and HRD program evaluations was not conducted, the search via email and ERIC revealed that, while programs are evaluated, few evaluations are published. The first recommendation, therefore, is to have the professional bodies (Academy for Human Resource Development (AHRD) and the Commission of Professors of Adult Education (CPAE)) initiate a process of collecting program evaluation reports to use as a reference source of data, instruments, and conclusions and recommendations.

A second recommendation, from the first, is to establish standards of practice and performance. While this has been discussed, and the CPAE established standards in the early 1980's, little reference is made to them, and nothing is presently being discussed.

A third related recommendation is to establish a review process of program reports and possible site visits. Universities, prompted by performance based standards of regional and professional accrediting bodies, are establishing units (offices or departments) of continuous improvement who are given the responsibility of developing and coordinating the performance based evaluation systems.

It is also recommended that the questionnaire be revised to more accurately reflect the program goals and performance outcome. As stated above, the questionnaire was based on a general College survey being conducted as part of the regional accreditation review. While as an initial questionnaire it proved to be effective, it needs to be revised if used again, which the faculty plan to do on a bi-annual basis.

Regarding recommendations specific to the program, based on the study the primary recommendation is the addressing of the identified weaknesses of the program, i.e., instructional technology and strategy skills, philosophical and scholarly attitudes. As an indication of the faculty's perception of the importance of instructional skills, attention has already been given to greater experiential activities and projects in existing classes, and the addition of a methodology course in 1997.

To address the area of philosophical and scholarly attitudes, as stated above, this will remain a problem with the program being in the College of Education and the requirement of taking general research and educational philosophy and psychology courses that are school (K-12) based.

Regarding the recommendation for better course scheduling, this also has been a persistent problem, as two complete masters and doctoral programs are offered at two campuses, taught by three faculty and occasional adjunct instructors. To address this problem a two-year schedule was implemented in Fall 1998, providing the complete degree programs at both campuses over two years. While the schedule is only in its second year, it appears that it has been favorably received.

Finally, while not a recommendation of the responding graduates, they were asked if they would like to receive a copy of the summary report, all said yes, and would they like to be included in an email listserv of graduates in order that the faculty could communicate with them for further input, internship opportunities for present students, an occasional request for financial support, and allow the opportunity for them to communicate with fellow graduates. All but four agreed.

It is the intent of the faculty to send this paper to all graduates, whether they responded or not and invite the non-responders to also be on the email listserv. It is as important to maintain contact with graduates as it is to seek information from them.

Few studies have been conducted on the effectiveness and impact of Human Resource Development and Adult Education graduate programs. With the increasing move toward performance based learning and outcomes, a foundation of specific outcomes and competencies are needed. This research hopefully contributes to the development of qualified HRD graduates as professionals in their discipline through a process of continuous improvement of the knowledge, skills, and abilities they develop and receive in their graduate programs.

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Effective Strategies for Recruiting College Students: The Case of Louisiana State University College of Agriculture

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The purpose of this study was to determine whether a model existed that significantly increased the researcher's ability to accurately explain whether or not a recruited student in the College of Agriculture at LSU will enroll based upon the current recruitment strategies. The target population for the study consisted of 1,130 prospective freshmen recruited to attend the College of Agriculture in the fall 1997. The actual sample size was determined using Cochran's formula for categorical data to be 143. Since complete data on all the variables for the subjects in the accessible population was obtained, all 226 subjects in the accessible population were studied. The instrument used in this study was a computerized recording form. Data were collected by copying the variables of interest from university undergraduate admissions and the College of Agriculture data bases. Discriminant analysis was used to determine models that explained the subject's enrollment status. Results showed that substantively and statistically significant models exist which enhanced the researcher's ability to accurately explain enrollment status.

Key Words: Student Recruitment, Enrollment Management, Recruitment Models

For admission offices to be successful in their recruitment efforts today and in the future, they must use a growing knowledge base to guide their recruitment programs. There is need for the analysis of the huge student data bases maintained by university admissions offices and colleges. The field of high school student recruitment is tricky, therefore, colleges are challenged to develop appropriate strategies to compensate for reduction of students in traditional academic programs (Miller & Eddy, 1983). Durkin (1985, p.14) observes that competition has increased in the environment in which institutions operate. Today, institutions are highly visible in the advertising marketplace, not only in newspapers but also in magazines, through direct mail campaigns and even radio and television. A marketing orientation is now being used by colleges to recruit and retain students (Berry & Allen, 1977; Blackburn, 1980; Johnson, 1981; & Kotler, 1976).

Colleges must consider needs and wants of their customers when designing the educational product (Stewart,1991). Even the most reputable colleges have to market themselves in the highly competitive market of student recruitment. Marketing as applied to higher education is a concept that allows college decision makers to think systematically and sequentially about the mission of the organization, the services it offers, the markets it currently serves, and the extent to which these same markets and possibly new ones may demand its services in the future (Ihlanfeldt, 1980a, p.13). Higher education deals with an intangible product that is more of a service than a commodity (Salee & Johnson, 1994). Admission officers therefore need to be careful when they apply marketing concepts to education. There is always some difficulty when it comes to quantifying intangible services such as education. Marketing can, however, enable college management to determine whether its mission matches student interests. In the 1970s and 1980s when the reality of declining students could no longer be denied, more astute college administrators recognized that marketing meant more than selling. It involved strategic decisions in other areas as well and the shift toward adopting a more "customer oriented" perspective began to surface in many institutions (Losher & Miller, 1983, p.9).

Kotler (1975, p.5) defines marketing as the analysis, planning, implementation, and control of carefully formulated programs designed to bring about voluntary exchange of values with target markets for the purpose of achieving organizational objectives. It relies heavily on designing the organization's offering in terms of the target market's needs and desires and on using effective pricing, communication and distribution to inform, motivate and service the markets. In higher education, Johnson (1979) observes that marketing tries to give first consideration to

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the student and societal needs. Losher and Miller (1983) note that one of the basic assumptions of an effective marketing program is that an institution is committed to the philosophy that colleges are in the people business and inflexible decision makers must yield to the needs of the consumers (the students) if they want to recruit them. Although marketing in higher education is mainly associated with promotion and recruitment, Johnson (1979), emphasizes that the scope of an effective marketing program should be more comprehensive and must include research, planning, communication and evaluation. Cox (1980) and Lovelock and Rothschild (1980) argue that marketing should be looked at as a total institutional concept which integrates trustees, faculty, administration and staff efforts into a cohesive team approach. They note further that the level of consumer involvement is of great importance in services marketing.

Unlike business enterprises that process raw materials into final products, colleges are in the 'people' business. The mission of colleges is to admit 'raw' students and process them into final products in the form of graduates. The concern for having the optimal number of students is now more pronounced than it was in the 1960s and 1970s. Faced with competition and limited financial resources, colleges are using several recruitment tactics to attract students. But to attract the required number of students, efficient recruitment strategies must be employed. Every college must develop its own unique selling points. An understanding of student college choice decision making is therefore critical in designing of unique selling points. For instance, while designing recruitment strategies at the college level, it is important to understand what motivates students to choose a given college. On the lack of data about student characteristics in many colleges, Brodigan and Dehne (1997) noted: "We find it strange how little most colleges know about the opinions, expectations, and satisfaction of current students." (p.18). They emphasize that at a minimum, a study of current students allows a college to obtain insights into the kinds of students the college might wish to target for admission as well as for reaching them.

Colleges and universities need to promote themselves as a way of coping with the stiff competition they face in student recruitment. In the 1990s, promotion activities have included college catalogs, direct mail, public relations, outreach programs, campus visits, home pages that most universities maintain, and Telecounseling. Promotion aims at portraying a good image or reputation of the university and therefore influence high schools students' decision to enroll. Psolka (1987, p.1) notes that for an increasing number of institutions, large and small, direct mail cements the strategies used to recruit the dwindling collegiate population. With regard to promotion as a recruitment strategy, Collinson (1987, p.8) observes that most colleges' publications are examples of image advertising designed to attract students.

Given the various sources available to the students and their parents, the majority of today's students understand how to research their college program and institutions offering it. Most students who decide to enroll in agricultural programs will take time to research existing colleges. The students' personal reasons are narrowed down from a university to colleges that offer the relevant program. There is an urgent need for micro-level studies that focus at the college level. Such studies have the ability to estimate the effects of student characteristics, college characteristics, and their interactions on the probability that a student will choose a particular college (Paulsen, 1990). Specific colleges within the university need to establish factors determining student enrollment decisions in order to develop the most appropriate marketing mix of attractive institutional products, delivered in appropriate places, at acceptable prices and appropriately marketed to prospective and potential students. Individual colleges in addition need to establish recruitment models that can assist in explaining and predicting student enrollment status. To develop efficient recruitment strategies at the college level, research is essential.

Statement of the Problem

Recruitment is an essential part of university admissions today. Numerous factors influence the selection of a particular college/university by the students. All universities realize the importance of having sufficient enrollments hence recruitment forms a substantial part of the budgetary allocations of their admissions offices. Colleges within universities must also maintain enrollments. To maintain their enrollments, many colleges have initiated active recruitment programs that supplement university recruitment efforts.

Therefore, the primary purpose of this study was to determine whether a model existed which significantly increased the researcher's ability to explain whether a student enrolled in the College of Agriculture at Louisiana State University based on recruitment strategies used by the university admissions office and the College.

Study Objectives

The following two specific objectives guided the study:

1. To establish whether a model existed that significantly increased the researcher's ability to accurately explain enrollment status among the freshmen recruited for admission in the College of Agriculture at Louisiana State University during the year of investigation, 1997-98 academic year.
2. To determine the most efficient recruitment model employed by the university admissions office and the College of Agriculture during the year of investigation, 1997-98 academic year.

Methodology

The target population for this study was defined as all prospective freshmen who were recruited to attend the College of Agriculture at LSU in the fall of 1997. The accessible population was comprised of fall 1997 prospective freshmen that resided on both the undergraduate admissions and the College of Agriculture databases. The university undergraduate admissions data base houses all undergraduate admissions contacts with students. The College of Agriculture data base equally houses all undergraduate admissions contacts with students such as: TAger Day, telephone, WWW, and attendance at 4-H and FFA functions.

Sample. Each sampling unit was comprised of a student who received at least one contact from both the LSU admissions office and the College of Agriculture prior to fall 1997. The minimum required sample size for the study was determined using Cochran's (1953) sample size formula for categorical data. A comparison of 1,130 students who resided on the College of Agriculture's contact list of 1997 high school seniors, with the university undergraduate data base gave a total of 226 students who met the criteria for inclusion as a member of the accessible population. From the accessible population, the actual minimum required sample size was determined to be 143. However, since complete data on all the variables for all the subjects in the accessible population were obtained, all 226 subjects in the accessible population were included in the study.

Instrumentation and Data Collection. A computerized recording form was the main instrument used for data collection in this study. Specific variables from both the university undergraduate admissions database and the College of Agriculture admissions database were selected. The variables selected were those that addressed the objectives of the study. A file was established into which the variables were systematically copied. The primary criteria of recruitment variables studied included: 1) student demographics 2) Mail contact 3) Campus visitation programs 4) Outreach programs 5) Financial assistance 6) Telecounseling, and 7) use of Internet. Data was collected during the spring and summer semesters of 1998 by copying over 70 variables from the university's undergraduate admissions data base and 29 variables from the College of Agriculture's admissions data base.

Findings

The study was designed to answer one major question: Does a model exist that significantly increases the researcher's ability to accurately explain the enrollment status of the students in the study? This section presents and discusses the results of the prediction models.

Enrollment Prediction Models. Discriminant analysis was the statistical technique employed to establish whether a model existed that significantly increased the researcher's ability to accurately explain enrollment status among the freshmen recruited for admission in the College of Agriculture at Louisiana State University during the 1997 - 98 academic year. This technique was found appropriate since the dependent variable, enrollment status is a dichotomus variable (Klecka, 1980). Three types of models were examined, the comprehensive discriminant model which employed all the recruitment activities measured in the study as well as all demographic information collected by the researcher. The second model, the comprehensive recruitment model included as independent variables only those variables that were specifically designed as recruitment activities by the university admissions office and the College of Agriculture. The third model, the most efficient recruitment model, included the fewest number of recruitment activities employed while still providing the researcher with a model that was both substantively and statistically significant.

The Comprehensive Discriminant Model

This model included all available information from the university admissions office and the College of Agriculture. The comprehensive explanatory model aimed at maximizing the researcher's ability to correctly classify subjects on the dependent variable enrollment status, defined as whether or not the subjects in the study enrolled as students in the College of Agriculture at Louisiana State University. The model included all recruitment activities carried out by the university admissions office and the College of Agriculture as well as the demographic information.

Before conducting a discriminant analysis, the independent variables to be included in the analysis were examined for the presence of multicollinearity. Although several techniques exist for conducting a multicollinearity test, Lewis-Beck (1980) shows that the most powerful method for assessing multicollinearity is to "Regress each independent variable on all the other independent variables" (p.60). The strength of this method lies in the fact that it takes into account the relationship of each independent variable with all the other independent variables and a combination of other independent variables. Whenever the cumulative R^2 values approach 1.0, there is high collinearity. To ensure that there were no cases of collinearity between the independent variables, the cumulative R^2 was checked for all the independent variables. The regression equations for all independent variables revealed two instances of excessive collinearlty. In each instance, one of the variables was eliminated from the final analysis to correct the problem.

The next step in conducting a discriminant analysis is to examine the computed standardized canonical discriminant function coefficients. As shown in Table 1, the centroids for the groups were determined to be -1.40 for the not enrolled group and .69 for the enrolled group. A total of 20 factors entered the discriminant model and produced an overall canonical correlation of R = .701. This indicates that the combination of the 20 factors in the model explained a total of 49% of the variability in whether or not students entered the College of Agriculture at LSU as freshmen.

Table 1:
Summary Data for Stepwise Discriminant Analysis of the Comprehensive Model

				Discriminant Functions
Variable	b	s	Group	Centroids
Dollar Amount	.71	.54	Not enrolled	-1.40
State	.49	.42	Enrolled	.69
ACT composite Score	-.43	-.08		
Non Alumni Parent	-.41	-.20		
Departmental Scholarship	.36	.31		
Explore Senior Invited	-.33	.11		
Alumni Parent	-.33	.06		
Tiger senior Invited	.28	.23		
Tour of campus	.26	.14		
Tuition Honors Scholarship	-.25	.04		
College Mail	.23	.05		
Hispanic	.23	.05		
FFA Judging Competition	.22	.00		
TAger Day 97	.20	.06		
Scholarship	.19	.49		
Campus Visit	.18	.11		
College Work Study Program	-.17	.13		
Rally	-.17	-.00		
Gender	-.15	-.06		
SAT Packet	-.14	-.15		

Eigen Value	Rc	Wilk's Lambda	P
.971	.701	.507	<.001

b = standardized discriminant function coefficient
s = within group coefficient
Rc = canonical correlation coefficient

The factors which were found to have the highest standardized coefficients were the dollar amount of financial aid awarded to the students, whether or not the student came from the state of Louisiana, the score obtained by the student on the American College Testing (ACT) examination, whether or not the student was awarded a departmental scholarship, whether or not the student's parent was an alumni of LSU, and whether or not the student received the LSU alumni association scholarship. A further examination of Table 1 reveals that the variable Amount had the highest within-group structure coefficient, s = .54. The variables that met the criteria for substantive significance (defined as those variables that had a structure coefficient of half or more than half the within-group structure coefficient of the highest variable) were whether or not the student came from within Louisiana, whether or not the student was awarded a departmental scholarship and whether or not the student was awarded a scholarship. Finally, the percent of correctly classified cases were examined. The comprehensive model was found to correctly classified 85.84% of the cases analyzed.

The Comprehensive Recruitment Model

Besides the comprehensive model, to accomplish objective two, a comprehensive recruitment model was determined. This model only included recruitment strategies. The demographic variables were eliminated.

Prior to conducting a discriminant analysis, independent variables to be included in the analysis were examined for the presence of multicollinearity. This was done by regressing each independent variable on all the other independent variables (Lewis-Beck, 1980). This procedure helped in establishing whether there were any cases of multicollinearity. The cumulative R^2 was checked to determine whether or not it approached 1.00. It was determined that there were no problems with collinearity. The computed standardized canonical discriminant function coefficients were examined. As shown in Table 2, the centroids for the groups were determined to be -1.25 for the not enrolled group and .63 for the enrolled group.

Table 2
Summary DATA for Stepwise Discriminant Analysis of the Comprehensive RecruitmentModel(N=226

	Discriminant Functions			
Variable	b	s	Group Centroids	
Dollar Amount	.70	.62	Not enrolled	-1.25
State	.68	.49	Enrolled	.63
Explore Senior Invited	-.40	.35		
Alumni Parent	-.33	.06		
Tiger Senior Invited	.28	.23		
Departmental Scholarship	.27	.35		
Tuition Honors Scholarship	-.25	.06		
FFA Judging Competition	.20	.02		
College Mail	.19	.05		
Rally	-.19	-.00		
Preview Invited	-.18	-.01		
Campus Visit	.18	.12		
Tour of Campus	.17	.16		
Other Sources of Funds	.16	.31		
State Vocational Rehabilitation Scholarship	.16	.14		

Eigen Value	Rc	Wilk's Lambda	P
.794	.665	.558	<.001

b = standardized discriminant function coefficient
s = within group coefficient
Rc = canonical correlation coefficient

Data in Table 2 shows further that a total of 15 factors entered the discriminant model and produced an overall canonical correlation of $\underline{R} = .665$. This indicates that the combination of the 15 factors in the model explained a total of 44% of the variability in whether or not students entered the College of Agriculture at Louisiana State University as freshmen.

The factors which were found to have the highest standardized coefficients were the total dollar amount awarded to the prospective students in the form of financial assistance, whether or not the student was from within the state of Louisiana, whether or not the student was invited to Explore LSU program during the senior year of high school, whether or not the student received LSU alumni scholarship (Top 100), whether or not the student was invited to Tiger Day during the senior high school year and whether or not a departmental scholarship was awarded.

A further examination of Table 2 reveals that the variable "Amount" had the highest within-group structure coefficient, s = .62. The variables that met the criteria of substantive significance (defined as those variables that had a structure coefficient of half or more than half the value of the within-group structure coefficient of the highest variable) were, whether or not the student came from within Louisiana, whether or not the student was invited to Explore LSU Program as a senior and whether or not the student was awarded a departmental scholarship. Finally, the correctly classified cases were examined. The comprehensive recruitment model was found to correctly classify 83.19% of the cases analyzed.

The Most Efficient Recruitment Model

The most efficient model in this study was defined as the model which included the fewest number of recruitment activities while still providing the researcher with a model that was both substantively and statistically significant. To determine the model, the comprehensive recruitment model was used as a base and all variables meeting the criteria for substantive significance for both the discriminant function coefficients and the within-group structure coefficients were selected. A series of discriminant models (3 factor to 14 factor) were examined to determine the most efficient model.

Each of the models was examined for the percent of the correctly classified cases to select the most efficient model. All of the models examined (3 factors to 14 factors) had a total percent of correctly classified cases varying from 76.55% to 83.19%. In addition, when fewer factors were entered, the drop in the overall total correctly classified cases was very small. The model that was chosen as the most efficient was the 6 factor model, as it had a very high percent of enrolled cases correctly classified, 82.7%. This percentage was the same as the one obtained for the 14 factor model. The six factor model also had a very high total percent of correctly classified cases of 80.09%.

The initial step in examining the derived most efficient model was to compare the groups on each of the independent variables. Independent variables to be included in the analysis were then examined for the presence of multicollinearity using Lewis-Beck's (1980) technique. The researcher determined there was one problem with multicollinearity, and one of the collinear variables was accordingly eliminated from the final analysis. Each of the factors that entered this model was statistically significant, however, fewer factors were found to meet the criteria of substantive significance for inclusion of the factor in the final model.

Since the purpose of this model was to determine the most efficient model, all variables were retained that met the statistical criteria for inclusion. As shown in Table 3, the centroids for the groups were determined to be -1.112 for the not enrolled group and .56 for the enrolled group. A total of six factors entered the discriminant model and produced an overall canonical correlation of $\underline{R} = .622$. This indicates that the combination of the 6 factors in the most efficient recruitment model explained a total of 39% of the variability in whether or not students entered College of Agriculture at LSU as freshmen.

Table 3

Summary DATA for Stepwise Discriminating Analysis of the Most Efficient Recruitment Model N=226

Variable	b	s		Discriminant Functions	
	Group	Centroids			
Dollar Amount	.79	.70		Not enrolled	-1.112
State		.70	.55	Enrolled	.563
Departmental Scholarship	.32	.39			
Explore Senior Invited	-.31	.16			
Tuition Honor Scholarship	-.23	.07			
Preview Invited	-.22	-.01			

Eigen Value	Rc	Wilk's Lambda	
.632	.622	.613	<.001

b = standardized discriminant function coefficient

s = within group coefficient

Rc = canonical correlation coefficient

Table 3 shows further that the factors which were found to have the highest standardized coefficients were the total dollar amount of scholarship awarded to the student, whether or not the student was from within the state of Louisiana, whether or not the student was awarded a departmental scholarship, whether or not the student was invited to Tiger Day as a senior in high school, whether or not the student was awarded a tuition honors scholarship and whether or not the student was invited to LSU preview.

Data in Table 3 show that the variables Dollar Amount (the total dollar amount awarded to the student), STATE (whether or not the student came from within Louisiana) and whether or not the student was awarded a departmental scholarship met the criteria of substantive significance for inclusion in the model. The variable the total dollar amount awarded to the student had the highest within-group structure coefficient of s = .70. While the variables STATE and Departmental Scholarship had structure coefficients of s = .55 and s = .39 respectively. The other variables that entered the model were retained since the purpose of this model was to establish the most efficient recruitment model. Finally, the correctly classified cases in the most efficient model were examined. This model correctly classified a total of 80.09% of the cases analyzed.

Conclusion

Substantively and statistically significant models do exist that increase the researcher's ability to correctly classify prospective students on their enrollment status at Louisiana State University in the College of Agriculture. Despite the fact that there are several factors that influence the college choice decision making process, the models in this study are viable. The comprehensive, the comprehensive recruitment and the most efficient models in the study not only identify factors that correctly classify the prospective students in the study, but also determine the specific students who were correctly classified as enrolled.

The researchers recommend refinement of the model by replicating the study, at smaller units. University admissions office, college recruitment personnel and all personnel involved in the recruitment of freshmen should engage in further study of the enrollment modeling as a way of improving enrollment management. The science of enrollment management is becoming complex and therefore requires more studies of this nature to help in explanation and prediction of student enrollment status. The College of Agriculture and all other colleges in the university require efficient and modern recruitment strategies that will ensure that students who 'fit" the mission of each college are recruited.

Limitations

This study mainly relied on quantitative methods of data collection and analysis. While this was necessary because of the nature of the study, the findings of the study could have been strengthened by employing a mixed methodology. This could have been done by interviewing some of subjects in the study.

The findings of the study can only be generalized to the sample of the 226 subjects who were included in the study and not the entire college of agriculture students who made initial contact with the college recruitment officers and the university undergraduate admissions officers during the year of investigation. Although limited in scope, the data generated from this study provide insight to enrollment management directors, faculty and all personnel engaged in the complex and unpredictable science of enrollment management.

Implication for HRD

Most of the existing HRD programs enroll graduate students. The findings of this study show that substantively and statistically significant recruitment models exist that can be employed in marketing undergraduate programs. In view of these findings, several implications emerge pertaining to HRD:

This analysis suggests that each HRD program like other university programs must endeavor to employ the most efficient recruitment models that will safe dollars while admitting the students who meet the "fit" and mission of the program. Further, refinement of the model by HRD professionals engaged in the training of graduate students is necessary. As the HRD programs develop in the US and other parts of the world, student recruitment studies become necessary. The science of enrollment management is becoming complex and therefore those running HRD programs and Colleges of Education need to conduct more studies of this nature to help in explanation and prediction of student enrollment status. All admissions officers and faculty involved in the marketing of HRD programs should benefit from the results of this study. As the findings of the study show, student recruitment requires combined effort from enrollment directors, staff and faculty.

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Innovative Techniques in The Training of Health Professionals: The Case of Moi University, Faculty of Heath Sciences, Kenya

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This article argues that innovative teaching /learning methods are quickly replacing the traditional methods which were characterised by straight lectures, large group demonstrations and apprenticeships. The current knowledge revolution requires innovative educational methods in the training of professionals. The current emphasis is to place the learner at the centre of the learning process. This emphasis shifts the responsibility of teaching/learning from the teacher to the learner. The paper specifically discusses the training of health professionals at Moi University and the innovative training strategies employed in the training.

Traditional teaching methods characterised by lectures and large groups demonstrations are quickly being replaced by modern innovative teaching/learning methods. The growing need for new and effective approaches was recognised by education in the field of basic and secondary school education in Kenya more than two decades ago when the calls were made to change curricula to make them more practical and relevant to the needs of the Kenyan people which led to the current 8-4-4 system of education. In this system, we have 8 years of Primary education, 4 years of secondary education and a minimum of 4 years of university education (Ministry of Education, 1984).

The interesting development is the recent recognition by some educators of the need for innovative education in institutions of higher learning particularly in the training of health professionals at Moi university.

The main emphasis of the innovative teaching method is to place the student at the centre of the teaching/learning process and to place the burden and responsibility for learning on the learner. The other major emphasis is to avoid rote-learning and to develop problem-solving and life-long learning skills for the learner; in short -teaching the student how to learn.

Hard core traditional educators who thrived in preparing lesson plans and then lecturing for hours to passive students find it difficult to change. They ask, "why do we need new teaching and learning strategies now, whereas we seem to have been doing well with lectures, practical demonstrations and apprenticeships for centuries?"

Some traditional educators who are responsible for training health professionals complain louder than all other educators. They ask, "why do health workers have to contend with the burden of how to learn besides the heavy burden of the immense subject matter of the various courses they have to take ?" These questions and others sum up the problem and need for innovative education especially for health professionals who are involved in the field of training and development.

Problem Statement

Trainers of all professionals particularly health professionals have experienced a great need to adopt new teaching/learning methods which will ensure effective learning for their trainees. This need has arisen from the knowledge-explosion, and the rapid technological changes which characterise our modern world. The traditional lecture methods where experts talked for hours to passive students, coupled with demonstrations done by the experts to large audiences have fallen out of favour. As trainers flee from the traditional methods, they have found themselves in the middle of a new problem – the problem of identifying and applying the innovative teaching/ learning methods thus replacing the out-dated traditional methods.

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The primary purpose of this paper was to conduct a thorough review of literature to identify the innovative teaching/learning methods. The paper also discusses the application of the innovative teaching learning strategies at the college of Health Sciences. Moi University. Kenya.

Research Questions

1. What innovative teaching/learning methods are appropriate for training health professionals at Moi University, Kenya, given the new environment which is characterised by rapid increase of knowledge and rapid technological changes?
2. What do innovative teaching methods or techniques entail?

Rationale for Innovative Teaching and Learning Strategies Increasing complexities of modern life call for adaptation to many changes that take place in many aspects of our daily lives, especially in this knowledge explosion era (Nafukho, 1998). Education ought to prepare professionals to adapt to the many changes, hence the need for innovative learning and teaching methods several powerful reasons have been offered as explanations for the rapid development of innovative educational methods. These have been articulated as follows :

1. Teaching methodologies that enable students to develop competencies required for successful, professional life, promote life-long learning, develop self-directed learning skills and problem solving skills have become more valuable than traditional methodologies.
2. Harden et al. (1986) noted that " through years at an authoritarian medical school, idealistic young doctors are moulded into rigid doctors who have lost much of their original ability." Medical and allied health professionals have also identified the deficiencies of traditional methods of training which have been characterised mainly by lectures, and large group demonstrations. They have developed new approaches and methodologies to address the deficiencies of the traditional methods.
3. Information explosion and rapid increase of knowledge-bases around the world has overtaken traditional teaching methods therefore teaching "How to learn" and "How to find out " have become more valuable than teaching digested facts, or spoon feeding "facts" to students.
4. Rapid technological changes have further complicated learning. The technology which is taught, crammed and practised today is obsolete before the students graduate, therefore, teaching methodologies that promote life-long learning skills have become more valuable because they enable graduates to keep-on-learning and keep up to date even after leaving school (Nafukho and Holmes, 1998)
5. Professional life in modern times calls for adaptability, participation in change and interaction with different specialists in problem-solving teams. Teaching methodologies that enable students to develop competencies required for successful professional life have become increasingly preferable to the straight-lectures and the rote-learning traditional methods, commonly employed by Kenyan University Lecturers and trainers.
6. Fast changing society, an expanding body of knowledge (information explosion), and rapid technological changes demand Continuing Education Therefore, learning skills developed during innovative education, enable doctors and other health professionals to do Continuing Education in a self-directed manner. Study and practice in the areas of medicine and health sciences is a life-long task.

Innovative education unlike the traditional education is a process which helps the student to develop skills such as:-

- Self directed learning
- Problem-solving
- Critical thinking
- Communication
- Information searching
- Evaluation
- Clinical reasoning
- Continuing Education
- Emotional & Social support
- Interpersonal

All of these skills help to convert students into: independent learners

During the teaching/learning process traditional teachers/lecturers are converted from preachers (information conveyor belts) to people who simply:

- facilitate
- advice
- guide (control)
- inform
- participate
- withdraw

Historical Development Of Innovative Medical Education

In the mid 1970's, many countries around the world had developed centres in faculties of health and medical schools with the growing recognition that a body of education/science needed to be understood by teachers of medical and allied health professions.

It was increasingly noted that by training teachers of medical and allied health professionals in educational methodology, the overall results were satisfying and rewarding. Specifically it was noted that modern medical education calls for teaching and testing beyond rote memorisation of facts and that training should be to done for:

- understanding of knowledge
- application of knowledge
- individual performance in realistic situations

As far back as 1951 a World Health Organisation (WHO) committee had made mention of the need for medical education. The first medical education program to meet the need for trainers familiar with appropriate educational methodologies was launched in University of Illinois WHO centre in 1959. In 1970 WHO began comprehensive co-ordinated long term programs for trainers of health professionals. In the same year an agreement was signed and WHO set up training centres for teachers of medical and allied health professionals. After establishing the Illinois Center, there was a proliferation of centres of educational Development for health professionals especially during the period 1971-73. The following centers were established during this period:

- For English speaking countries - WHO Regional Teacher Training Centre
- (WHO - RTTS) at Makerere University, Uganda.
- For French speaking countries - WHO Regional Teacher Training Centre at University Centre Younde, Cameroon.
- For Americas - WHO - RTTC in Mexico, and in Rio De Janeiro, Brazil.
- For Eastern Mediterranean at Pahlari University, Shira, Iran.
- For Western Pacific - University of New South Wales in Sydney, Australia.

Innovative medical education has been developed in response to dissatisfaction of public and health professionals with results of traditional medical education. Innovative strategies were used the Greeks – in what were called the dialogue and questioning method (Plato) (Boud and Feletti 1991). Chamberlain (1889) advocated "Multiple-making hypotheses." John Dewey (1916) recommended the use of Real-Life situations", and problems to be presented as part of the learning process. John Dewey (1929) and Piaget (1969) had actually demonstrated the ineffectiveness of providing ready made solutions to learners. Frazer (1931) and Brunner (1961) demonstrated how problems may be used in education. Recently (1980) Cyert pointed out that "All professionals are problem solvers and should be taught in problem-solving processes.

Brunner is the main proponent of discovery learning which is an important aspect of Problem-Based Learning (PBL). Frazer founded the case study method in which a case contained the facts, opinions and expectations needed to trigger off and feed a process of learning.

In 1961 the application of the problem-solving approach to the whole medical curriculum was started by Ham and associates at Case Western university, Cleveland Ohio, USA, in a Haematology course. The results of a comparison between students taught in the didactic method and those taught in innovative way - PBL -SDL showed the latter to be superior in exam scores

In 1969, Howard Barrows in McMaster University in Ontario, Canada established the first problem solving curriculum. The approach they developed was the PBL approach. This method resembled both discovery learning and the case study method. In 1974, the university of Maastricht became the first European medical school to start an innovative medical education program, Problem-Based Learning (PBL).

The other well known universities to launch innovative medical education programs include:

- •New Castle Medical School, Australia -(1979)
- •Suez Canal University, Faculty of Medicine, Egypt -1982.

WHO has contributed generally to the establishment of innovative medical education programmes. It supported the establishment of a net work of community -oriented educational Institutions for health sciences in 1979. By early 1990's, it is notable that more than 50 institutions, had became members of the network. By mid 1990's, more than 70 countries had signed up as collaborating members in Problem -Based Learning. In the case of kenya, It is noteworthy that the college of health sciences of Moi University became a WHO Problem-Based Learning collaboration centre in 1994.

Theoretical Framework

The framework of this paper centers on the work done by World Health Organisation (WHO) in the area of effective education for health workers and the efforts of the college of Health Sciences of Moi University, Kenya to respond to the need for identification and application of innovative teaching/learning methods. As shown in the historical background of this paper, even before 1951 a committee of WHO had mentioned the need for measures which would ensure effective teaching of health workers. Since the health professionals make a major contribution to national development, it is crucial that their training should emphasize the application of the knowledge acquired during training.

Research Methodology

This is mainly a concept paper that has reviewed the pertinent literature in the work done by WHO in the area of medical education and the literature pertaining to innovative teaching/learning methods. This is then applied to the actual teaching practices employed by the College of Health Sciences, Moi University, Kenya.

Innovative Teaching at Moi University College of Health Sciences

The mission of Moi University is to produce graduates with practical and intellectual skills appropriate to the needs of present and future Kenyan society. The College of Health Sciences of Moi University strives to ensure that the students acquire such skills using modalities that encourage active learning in the context in which they will later function as health professionals.

The philosophy of the college, also embodied in the curriculum, entails training a doctor in the context of the community, in which he/she will later practise. It encourages the student to acquire the important skills of self directed learning, problem solving, and effective communication. Moreover the college emphasises not only curative, hospital based medicine, but also , through its community oriented approaches, prevention of diseases and promotion of good health.

Research orientation and an inquiring mind are integral parts of the training of a medical student, as well as other health professionals. The college, therefore also lays emphasis on acquisition of knowledge and skills in research, so that the graduates from all her programs will be able to carry out research, in the health and health related issues in modern day Kenya.

As a result of the overall mission and philosophy of Moi University, the orientation of educational programs at the College of Health Sciences are population and community based. The teaching and learning strategies have been deliberately chosen to encourage acquisition of an integrated and holistic body of knowledge and skills through self - directed active learning methods. This supports the mission of Moi University of producing graduates who are practical in outlook and suited to meet the needs of the present and future Kenyan society.

Innovative Teaching Methods

The following are the common methods used in innovative medical education :

- Self-directed learning (SDL)
- Small Group tutorials/Discussions
- Competence-Based learning
- Community Based education & service
- SPICES
- Case study
- Project
- Demonstrations
- Illustrated/Overview Lectures
- Role-play
- Computer-Assisted Instruction (CAI)

Self Directed – Learning Self-Directed Learning involves clear establishment of objectives by the learners. This may be done by individuals or groups of students. They may do it entirely on their own, or with some guidance from tutors. Information gathering commences and may lead students to either the library, learning resources centres, outpatient and in-patient hospital locations. It may lead student to consult either among themselves, their tutors, subject experts or guest consultants

The major aspect of self-directed leaning is that students determine what they need to learn and to what depth. However, some guidance has to be put in place, and the availability of resources persons included whenever needed.

A special point worth noting in self-directed learning, is that tutor/guides, student guides, course booklets and curricula have to be available to students. This is in recognition of the fact that although some students may be fully capable of self directed learning, a small percentage require occasional guidance while a greater majority may require much more guidance from tutors. Student guides and other booklets may reduce the need for students to depend on tutors for their learning. SDL at Moi University is used in conjunction with Problem - Based – Learning (PBL). At times it is used entirely on it's own as a method of teaching depending on the circumstances.

Small Group Tutorial/Discussions Small Group Tutorial discussions, involves small number of students working together in the teaching/learning process. The number of students in a group ranges between 5 -10. Small group tutorials facilitate the development of many skills which are emphasised in innovative medical education and thse include :

- Problem-solving skills
- Communication skills
- Reasoning skills
- Interpersonal skills
- Teamwork
- Attitude - shaping

Ideally small group tutorials should function under the supervision of a tutor whose role should be facilitatory as opposed to authoritarian. However, group dynamics need to be taught to students in order to prepare them for the interaction and the effects of this on student learning. Particularly, students need to know of the stages of group encounters and interaction such as :

- Forming
- Storming
- Norming
- Performing
- Teamwork
- End of group work

Competence Based Learning Competence Based Learning emphasises performance of the learners in terms of knowledge, skills and attitudes, and is therefore an appropriate method for professional training.

Competency Based Curricula The competency -based curricula have been used in designing and developing educational programs in health professions for many years. This model has been found to be quite appropriate in Problem-Based Learning, students-centred, community-oriented and integrated programs (Mutema, Kang'ethe and

Kivanguli. 990), Harden, (1986) described ten major steps that are critical in developing a competency -based curriculum. Table1 presents the process of developing a competency - based curriculum in health professions.

Table 1
Process of Developing Competency-Based Curricula in Health Professions

Step	Activity
Step 1	Identification of health problems
Step 2	Identification of professional roles and functions.
Step 3	Performing Task Analysis on Professional roles and functions.
Step 4	Development of educational Aims, Goals, and Objectives/ Task Analysis.
Step 5	Identification and selection of Subject matter/ Content to be learnt.
Step 6	Identification of teaching/ Learning Methods.
Step 7	Identification/ Selection of Learning resources.
Step 8	Identification of Assessment Tools to determine learner performance.
Step 9	Curriculum Implementation
Step 10	Curriculum Review and Change.

Community Based Education and Service (COBES) Community Based Education and Service is basically aimed at providing students with opportunities for learning within the communities. During such periods, students learn the sources, the nature and magnitude of health problems and related problems. In exchange for learning in this real life environments, students provide needed health-related services to different communities, each according to need.

SPICES The SPICES method is an approach that is commonly used at the Faculty of Health Sciences of Moi University. It is more than a teaching/learning method it is also a curriculum development approach. The Spices model is another educational approach that has been found extremely useful in developing curricula in health professions and especially those educational programs that put emphasis on problem -based learning, students centered, integrated community-oriented, electives and systematic as the acronym "SPICES" shows. The spices model has been found appropriate in planning, review and tackling problems related to the curriculum and in providing guidance relating to teaching methods and assessment of student performance.

In recent years there has been increased interest in curriculum planning in health professions due to many factors which have been raised earlier. In planning the curriculum and especially in new faculties of health sciences, innovative approaches such as (SPICES) have been considered. These are shown in Table 2 and are compared with traditional approaches in medical education.

Table 2:
Curriculum Approaches -- "SPICES" VS TRADITIONAL

	"SPICES"	Traditional
S	Student- Centred	Teacher-Centred
P	Problem Based	Information Gathering
I	Integrated	Discipline Based
C	Community- Oriented	Hospital -Based
E	Electives	Standard Program
S	Systematic	Apprentice-Based Or Opportunistic

In the planning and developing of the Moi University Health Sciences curriculum the use of the "SPICES" had to be considered in order to assist the teachers to understand the particular educational strategies they needed to use in implementing their programs. Also, by examining each of these issues it gives teachers and policy makers a better understanding and insight into the whole curriculum. The competency-Based Model and the spices model of curriculum development are useful educational strategies that have been used at Moi University to develop relevant curricula which are responsive to the health needs of the community. The application of these models has also assisted in making rational decisions during the initial planning stages and also during the actual process of designing, developing, integrating, implementing and evaluating the curricula.

Case Study This is a method in which medical and allied health professionals select cases and use them as the focus of study. Students take each case, read about it, analyse it, and make suggestions and recommendations regarding the case on the basis of the evidence they have gathered. Problem-solving skills including information searching skills are developed among other skills.
Project Method This is a method of teaching/learning in which learners are assigned a task or group of tasks to carry out over a given period of time. At the end of the same period, the learners make a presentation or submit project -reports for assessment. At Moi university students choose their own projects with guidance from their tutors.
Demonstrations This is a most appropriate method, especially for teaching skills. In the innovative medical education, several points are emphasised with a view of facilitating maximum benefit from this process. The cardinal point of emphasis is that provision be made for students to practise and actively participate in the learning process. Therefore, such aspects as demonstration being clearly visible to learners, audible and correct in procedure are deemed as vital..
Illustrated/ Overview Lectures In traditional medical education, lectures are typically cathedral type, boring and for the majority of students facilitate little learning. In innovative medical education lectures are to be over - view and spanning the major areas of study. As little time as possible is spent on direct lecture, with opportunities sought to interact with the learners whenever possible. - Use of handouts, posters, charts and other audiovisuals are encouraged in order to provide illustrations for the topics being addressed.
Role Play This is an old method of teaching but increasing in popularity hence its inclusion among innovative medical education methods. Depending on the objectives of a session, a tutor or students, assign each other different roles. By acting out these roles, students learn various correct functions and responsibilities intended for the session. Active participation and team work are among the major benefits of this method. Clear statements of the goals and objectives of the session are however necessary.

Computer Assisted Instruction Computers are being used increasingly in all spheres of education. Particularly, they are being used for teaching as well as assessment. Cox and Ewan (1988:244)indicate that three broad categories of computer programs are available for medical education which include:

- computer assisted instructions -CAI
- computer assisted assessment -CAA
- computer managed instruction-CMI

At the College of Health Sciences, Moi University, Introduction to computer applications is one of the courses that all student are required to take during the first year of study. In subsequent years, students are encouraged to use computers which are conveniently placed in resource rooms and laboratories. Although computers may not currently be extensively used in the developing countries there is evidence of increased use in future especially in urban areas.

Contribution to Human Resource Development

The Human Resource Development field has a major role to play in promoting learning both at the workplace and at the learning institutions. As demonstrated in this paper HRD professionals who are engaged in training must employ innovative teaching techniques which aim at producing effective and creative professionals. The health workers who have been trained at the College of Health Sciences of Moi University, include three groups of medical doctors, environmental health officers and nurses. The three cohorts of students who have graduated from the College have been very successful in the field. The general feedback from their supervisors in Provincial and District hospitals where they work, has been very positive. The graduates have been described as being very practical and community oriented.

Conclusion

Preparing effective doctors and auxiliary health professionals for the 21st Century will require innovative teaching methods. Such methods will be important in preparing health workers to become independent learners who will be able to effectively deal with the health care problems of the 21st century. This paper has provided the rationale for innovative teaching strategies at Moi University's College of Health Sciences, Kenya. Also discussed is the historical development of innovative educational programs world over. The paper has equally discussed in detail innovative teaching methods employed in the training of health professionals in the College of Health Sciences. Moi University. Kenya.

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Relationship Between Learning Organization Strategies and Performance Driver Outcomes

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In this study a new learning organization assessment instrument was administered to 440 employees (53% response rate) at a large nuclear power plant anticipating extensive changes. Initial factor analyses indicated 22 separate scales, all with acceptable reliabilities. Regression analyses showed initial evidence of criterion and discriminant validity. Hierarchical regression showed that instrument factors predicted 70% of perceived innovation and suggested mediated relationships for future structural analyses.

Keywords: Learning Organization, Assessment Instrument, Performance Outcomes

The learning organization literature suggests that adoption of learning organization strategies should enhance learning at the individual, team, and organizational levels. In addition, organizational learning should be related to change and innovativeness (Kaiser & Holton, 1998). And, it has been suggested that the ultimate outcome of organizational learning is performance improvement. However, Jacobs (1995) cautioned that research is needed to objectively test the claims of improved organizational effectiveness brought about through implementation of learning organization strategies. As Jacobs (1995) discussed, the deficiencies and the challenges include: 1) the lack of research supporting the claim that a causal relationship exists between learning and performance, and 2) research is overdue which demonstrates that the adoption of learning organization strategies lead to organization performance improvement. This problem has only recently begun to be addressed (Ellinger, 1998; Kaiser & Holton, 1998; Selden, Watkins, Valentine, & Marsick, 1998; Yang, Watkins & Marsick, 1998).

The purpose of this study was to empirically address some of these validation issues. This field study developed a new instrument to assess learning organization strategies; measured perceptions of learning organization strategies; and, provided a preliminary test of the relationships between the organizational variables and the outcome measures of learning, external alignment, and innovation. The complete set of research hypotheses can not be listed due to space limitations but the general research questions was: Would measures of learning organization strategies predict learning (team, experiential, and generative) and when combined with learning, predict innovation and external alignment?

Theoretical framework

Learning organization theorists have made the claim that organizational performance effectiveness should be improved by adopting the features described as basic components of a learning organization (Kline & Saunders, 1993; Kuchinke, 1995; Senge, 1992; Slater & Narver, 1993). However, they have struggled with the issue of empirically demonstrating relationships between the many prescribed learning organization strategies and performance improvement outcomes.

Holton (1999) provided a partial answer when he addressed the meaning of organizational performance. He drew the distinction between "performance" and "performance drivers" which clarified the roles of different strategic outcomes. Performance was defined as the tangible products or the services provided by the organization. Performance drivers were defined as elements of performance that build capacity to maintain or intensify the individual's, processes', or system's ability to be effective or efficient in producing outcomes. Learning and innovation are examples of organizational performance drivers (Kaiser & Holton, 1998). As a set, performance and performance drivers explain the hypothesized cause and effect relationships in an organization's strategy (Kaplan & Norton, 1996). They are both important to the successful attainment of organizational goals. In this conceptualization, the learning organization is an organization development strategy aimed at increasing organizational learning, which is defined as a performance driver.

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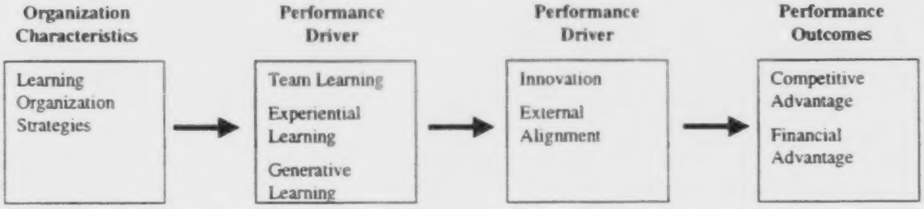
While it would be ideal to measure the effect of LO strategies on performance as measured by traditional business outcomes such as financial indices and market share, that is often difficult to accomplish on a timely basis. An alternative study of the relationship between learning organization strategies and performance is to examine the effect of learning organization strategies on organizational performance drivers. Kaiser and Holton (1998) proposed that if organizational learning and innovation were conceptualized as drivers of organizational performance, the conceptual model shown in Figure 1 might explain the role of learning organization strategies in improving organizational effectiveness and performance. The model hypothesizes that adoption of learning organization strategies should lead to organizational learning. In turn, learning will lead to innovation in organizations that value creativity and innovation. Learning and innovation are predicted to act as performance drivers and should affect organizational performance effectiveness under the right environmental conditions.

Figure 1 - Model of learning organization as a performance improvement strategy



Adapted from Kaiser & Holton, 1998.

Method

The site for a pilot study of this model was a large nuclear power plant. The electric power industry is currently undergoing extensive deregulation, similar to the changes that the telephone industry faced. The expected outcome of deregulation is a shift from a stable regulated utility environment to one of intense competition. Power companies are expected to separate the generation of electric power from the distribution function so that power distributors will be free to purchase electric power from any source. The prospect of a new, unstable, uncertain environment has led power companies to explore the learning organization as a strategy to cope with this new environment and enhance their competitiveness. This plant contracted with a university HRD program to conduct an organizational assessment. The purposes of the assessment were to evaluate organizational systems in relationship to learning organization characteristics and determine the scope of organizational change required to become a learning organization.

Instrument Development A review of the available learning organization assessment instruments at the time the project began suggested that none existed which completely assessed all the hypothesized influential variables of organizational learning. In addition, many existing instruments had not been validated with rigorous psychometric procedures. Accordingly, it was decided to develop a new instrument that would be a) grounded in a theoretical model of organizational change and effectiveness and b) be developed using sound psychometric procedures. The organization's management was open to a proposal that the consulting team develop a new inventory and to the addition of a research option to the project.

The development process involved two major components. The first step consisted of a series of five focus groups conducted with 48 selected employees. The employees represented the following job categories: classified craft, organizational support (clerical), first-line supervisors, professional (engineering), and middle management (superintendents). Each focus group lasted for approximately 90 minutes and was held in a private conference/training room with only three members of the research team in attendance.

Next, the research team[1] used the Burke-Litwin model (Burke & Litwin, 1992) of organizational performance and change as the theoretical framework to develop a survey instrument. Its integrated variables portray the dynamic relationships in an organization system. When used with a learning lens, the Burke-Litwin model provided a means to integrate the organizational change literature and the learning organization literature; explore the important variables in organizational change and development as related to organizational learning; and establish a foundation upon which to assess both the process variables and the outcome variables important in learning organizations.

Our approach was to examine each of the model's constructs through a learning organization lens. Items were created to assess employee perceptions of the degree to which learning organization practices were present in the respondent's organization. In addition, scales were developed to assess respondents' perceptions of key learning organization outcomes. It is important to note that the employee focus groups were used to provide a reality check, but were not the primary source of the items. The instrument was developed primarily by integrating organizational change and learning organization theory.

The Kaiser–Holton model shown in Figure 1 does not attempt to describe the relationship between the learning organization strategies, but only the relationship of the strategies to learning and performance as an organizational development system. However, the Burke–Litwin model hypothesizes the relationship between the organizational factors that are the targets of the learning organization strategies. These two models used in concert were hypothesized to represent the relationship between the learning organization strategies, learning, and performance.

Learning Organization Inventory The Learning Organization Inventory contained a total of 212 items designed to tap employees' perceptions about various learning practices, beliefs, behaviors, and attitudes. This instrument has also been identified elsewhere in the literature under the name *Assessing Strategic Leverage for the Learning Organization* (ASLLO) (Gephardt, Holton, Marsick & Redding, 1997; Holton & Kaiser, 1997). The instrument was divided into nine construct domains: organization as a whole, work groups, business strategies and plans, general beliefs, senior management, managers/supervision, organizational support systems, organizational structure, and what is rewarded and expected. Each item used a six-point Likert rating scale (1= not true, 2= mostly not true, 3=somewhat not true, 4=somewhat true, 5=mostly true, 6=true). A demographic component addressed the respondents' work group, job category, level of attained education, and time of service with the company.

Sample The inventory was sent via intercompany mail to all 828 employees in the organization. A pre-addressed envelope was provided with instructions to use company mail to return to the surveys to the university. No company personnel handled the completed surveys. A total of 443 inventories were returned with 440 usable for a usable return rate of 53%.

It became apparent early in the collection phase that there was a strong reluctance on the part of craft employees to participate in the assessment process. Suspecting that lack of time during the workday may have been a reason for the low participation, arrangements were made to provide employees an on-site opportunity to complete the inventory. This added only a few more inventories, bringing the number completed by craft employees to a total of 82 inventories, or 18.6% of the sample. Thus, craft employees are under-represented in the sample. A similar under-representation occurred with Senior Management; only seven of twelve responded. This lack of participation is perplexing because the learning organization initiative began with Senior Management. Professional/Technical employees were over-represented, with 222 respondents or 50.5% of the sample.

Analysis Exploratory factor analysis was deemed the most appropriate approach for scale development. While the instrument had a reasonably strong theoretical foundation, the integration of two theoretical bases made confirmatory factor analysis premature. Also, the large number of inventory items compared to the number of subjects prevented an exploratory factor analysis of all 212 items simultaneously. The decision was made to examine the items for underlying factors using the nine construct domains defined on the inventory. Each construct domain was a separate section on the questionnaire and had separate instructions. Items in each category were factor analyzed by principal axis factor analysis with oblique rotation (direct oblimin). Principal axis (common factor) analysis and oblique rotation are generally considered more appropriate when the purpose is to identify latent constructs for subsequent theoretical interpretation (Hair et al., 1998). Items loading at .40 or higher were retained. Item-respondent ratios ranged from 11.0 to 48.9, all in excess of the desired 10:1 ratio (Hair, et al., 1998)

It is clearly possible that a more parsimonious scale structure would emerge if the factor analysis were conducted with a larger sample and all items entered simultaneously into the analysis. However, the instrument specifically identified nine separate domains for which scales should be identified. Therefore, the current analysis is conceptually defensible for initial analyses, though these results should be considered preliminary.

Initial determination of the number of factors to retain was done using the eigenvalue equal to one criterion. However, this criteria is not always the most appropriate when the purpose of the analyses is to discover latent organization entry constructs and not simply to reduce the number of variables used in subsequent analyses. Interpretable factors with low eigenvalues could capture important latent organizational entry constructs. Thus, the analysis also included examination of factor structures at least one above and below the number indicated by the eigenvalue equal one criteria for each set of items as well as examination of scree plots.

Multiple regression and hierarchical multiple regression analysis (Cohen & Cohen, 1983) was used to evaluate to determine predictors of perceived learning and innovation outcome variables. Hierarchical regression analysis is particularly appropriate in early stages of theory development as it not only evaluates predictive power but can also suggest possible meditated relationships for future path or structural equation modeling analysis.

Results

Demographics The sample consisted of employees who were predominantly working in professional/technical jobs (50.2%); had some college (28.9%) or a bachelor's degree (25.9%); and had been employed by the company 3-10 years (47.3%) or 11-15 years (33.9%). The inventory also had a choice of 23 work groups from which employees were to select the one most appropriate for them. The single most frequently selected work group was Site Engineering with 59 employees or 13.4% of the total respondents.

Factor Analysis Results Factor analyses identified 22 separate scales, all with acceptable reliabilities (see Table 1). In 7 of the 9 domains the factors retained were those that were a) identified when the eigenvalue equal one criterion was used, b) had a Cronbach's alpha reliability of .70 or higher (Nunnally & Bernstein, 1994) and c) had at least two items. It should be noted that Gorsuch (1983) recommends not retaining any factors with less than three items. However, given the early development stage of this instrument, it was decided to retain one factor with two items that appeared theoretically sound. Two domains (manager/supervisor, rewarded and expected) did not result in clean interpretable structures initially. In both cases, fewer factors than indicated by the eigenvalue equal one criterion were deemed appropriate. This is consistent with evidence that this criteria can result in over factoring, while the scree test may yield fewer factors (Gorsuch, 1997). The scales that emerged from the factor analysis were used to interpret the organization's data and complete the objectives of the project.

Table 1

Instrument factors, reliabilities, and definitions

Organization Factors – 34 items			
Innovation	9	.90	ability of the organization to adopt and/or create new ideas and to implement these ideas in the development of new and better products, services, and work processes
Motivation/Engagement	5	.79	levels of organizational commitment and job involvement as expressed by the work effort and behaviors of employees
Generative Learning	7	.81	organization's ability to understand business goals and problems and make core changes needed to better attain stated objectives
Learn from experience	3	.84	organization's ability to learn from experiences, whether the experiences are considered successes of failures, and to draw on the knowledge learned to make better decisions or business improvements
External Alignment	5	.81	ability of the organization to understand its relationships with and the needs of its business environment, markets, suppliers, and customers in order to remain competitive and viable
Internal Alignment	5	.84	level of organization's integration of goals, functions, roles, work efforts, problem-solving and decision-making, in order to increase organizational effectiveness
Work Group Factors - 9 items			
Team Learning	9	.90	ability of workgroups to acquire, interpret, and share knowledge in order to enhance the group level learning and work practices
Business Plans and Strategies –15 items			
Knowledge Creation	7	.89	extent to which the organization seeks to acquire, disseminate, and interpret information to establish an organizational knowledge-base to improve organizational performance
External Monitoring	2	.82	level of organizational efforts to be aware of business and industry trends and forces which affect organizational effectiveness
Systems Thinking	6	.83	degree to which the organization and its members both recognize and act from an organizational systems perspective
General Beliefs – 14 items			
Knowledge Indeterminacy	5	.80	belief that knowledge is not fixed and any individual may be a source of knowledge, while no one person can know all things
Learning Latitude (Risk-taking)	4	.75	extent to which organizational members perceive that they can take risks to learn and try new things
Organizational Unity	5	.81	belief that all organizational members are working toward recognized common goals for the benefit of the organization
Senior Management Factors – 13 items			
Leader Support for Learning	13	.94	perceived level of strong, visible commitment by senior management to the values and actions necessary in a learning environment
Manager/Supervisor Factors – 26 items			
Management Learning-Support Practices	13	.94	extent to which employees' supervisors take actions to promote and enable learning to occur
Management Learning-Motivation Practices	5	.88	extent to which supervisors' actions motivate employees to learn and develop both as individuals and as groups
Management Performance-Effectiveness	5	.89	extent to which supervisors take action to enhance job performance and effectiveness
Management Logistical Provision/Support Practices	3	.84	extent to which supervisors create work situations that enable effective job performance
Aspects of the Organization – 13 items			
Supportive Organizational Systems	13	.90	perceived ability of various organizational systems (communication system, information system, human resource system) to support organizational learning
Way the Organization is Structured – 5 items			
Facilitative Structures	5	.77	extent to which the organizational structures provides access to individuals and groups both inside and outside the organization for information sharing
Climate - 22 items			
Generative Learning Climate	12	.93	extent to which the work climate encourages continual learning that challenges organizational norms
Promotive Interaction	10	.85	degree to which individuals act to encourage and facilitate each others' efforts to grow, perform, and achieve success

The 22 scales of this inventory assessed Burke-Litwin's transformational and transactional variables affecting change, learning and growth. Table 2 shows transformational and transactional variables suggested by the Burke-Litwin model, and what are believed to be the appropriate scales from the assessment instrument which provide a measure of each of these organizational variables through a learning lens.

Table 2
Comparison of Burke-Litwin model and instrument scales, along with pilot site results.

Burke-Litwin Model Construct	**Assessment Instrument Scale**	**Pilot Site Means (1 - 6 scale)**
Transformational Dynamics of Learning:		
External Environment	Not assessed: influences external to the organization	
Leadership	Leader Support for Learning	3.74
Mission and Strategy	Knowledge Creation	4.02
	Internal Alignment	3.90
	Systems Thinking	3.81
Organizational Culture	Knowledge Indeterminacy	5.04
	Learning Latitude (Risk-taking)	3.60
	Organizational Unity	5.05
Transactional Dynamics of Learning:		
Management Practices	Management Learning Support	4.29
	Management Learning-Motivation	3.45
	Management-Performance-Effectiveness	4.02
	Management-Logistical Provision/Support	3.57
Structure	Facilitative Structure	3.33
Systems: Policies/Procedures	Supportive Systems	3.46
Work Unit Climate (rewarded and expected)	Generative Learning Climate	3.80
	Promotive Interaction	3.62
Motivation	Motivation/Engagement	4.25
Task Requirement & Individual Skills/Abilities	Not Measured	
Individual Needs/Values	Not Measured	
Outcomes		
System level Learning Outcomes	Learn from experience	4.24
	Team Learning	4.25
	Generative Learning	3.20
Performance Drivers	Innovation (perceived)	4.14
	External Alignment	4.13

Descriptive Results Table 2 also shows the mean scale scores for the pilot site. Because this was the first use of this instrument, no norms were available to which these scores could be compared. Analysis of variance (ANOVA) was conducted for each scale within each of the four demographic classifications: work group, job category, education, and time with the company. Significant differences were found within the job, education, and service time categories. For job category, organizational support employees reported higher scale means than other groups on 11 scales. Classified craft/operators also reported some differences. A two-way ANOVA was used to explore the possibility that differences found among the job categories might be due to an interaction with educational level. No interaction effect was found. For educational level, employees with only a high school education reported significantly higher scale means on 17 of 22 scales. Finally, for length of service, employees with more than 15 years of service reported lower scale means on 6 scales.

Analysis of Outcomes Five outcome scales were identified based on the conceptual framework underlying the instrument. It is important to note that these outcomes were all respondent perceptions of outcomes, not objective measures. As shown in column one of Table 3, they represent four system level outcomes (#1 - 4) and one team/group level outcomes (#5). The correlations among these outcome variables are also shown in Table 3. All of the correlations were statistically significant and moderately strong.

Table 3
Correlations among outcome scales

	1	2	3	4
1-Innovation				
2-Generative Learning	.565			
3-Learning from Experience	.597	.500		
4-External Alignment	.684	.508	.615	
5-Team Learning	.706	.547	.578	.561

Next, measures of learning organization characteristics were regressed on each of the five dependent variables to gain initial insights into the predictive power of the variables as hypothesized in the instrument's conceptual frame. Table 4 shows the scales with significant standardized betas for each dependent variable, along with the R^2 for each model. The R^2 were high, ranging from .50 (experiential learning) to .71 (innovation). While one must interpret this finding cautiously due to the possibility of common method variance, the magnitude of the variance explained nonetheless provides initial evidence of criterion validity for these scales. Furthermore, the significant predictors varied with no predictor appearing in all equations. Knowledge creation and internal alignment appeared in four equations, management performance effectiveness and motivation/engagement in three equations, and the rest in two or fewer equations. This lends support to the discriminant validity of the scales.

Kaiser and Holton (1998) proposed that learning organization strategies such as those measured by these scales improve performance by increasing learning which in turn increases innovation and external alignment, leading to improved performance outcomes under conditions of environmental uncertainty. Thus, a second analysis was conducted using hierarchical regression to determine the extent to which the predictor variables added to the variance explained in each dependent variable. For space reasons, only the analysis for innovation is discussed here (see Table 6).

Table 4
Regression analysis results for perceived performance driver outcome variables

Assessment Instrument Scale	Experiential Learning	Team Learning	Generative Learning	Innovation	Ext Align
Leader Support for Learning				.14	
Knowledge Indeterminacy					
Learning Latitude (Risk-taking)		.15			
Organizational Unity					
Systems Thinking					.12
External Monitoring				.23	.17
Knowledge Creation	.20	.26	.15	.11	
Mgt. Learning Support		.15			
Mgt. Learning-Motivation					
Mgt. Performance-Effectiveness		.18	-.13	-.11	
Mgt. Logistical Provision/Support					-.14
Internal Alignment	.36	.22	.25		.18
Facilitative Structure					
Supportive Systems					
Generative Learning Climate	.15	.13			
Promotive Interaction			.36		
Motivation/Engagement		.13	.19	.12	
Experiential Learning				.12	.20
Team Learning				.16	
Generative Learning					
R^2	.50	.69	.59	.71	.58
(Adjusted R^2)	.48	.68	.58	.69	.56

Each set of learning organization organization strategy variables was entered separately in the analysis (steps 1-8) with learning outcome variables entered in step 9. Key findings included: 1) leader support for learning was a significant predictor in all steps, though decreasing in magnitude, 2) knowledge indeterminancy was also significant until learning outcomes were entered in the last step, 3) external monitoring and knowledge creation remained significant after entering the equation, 4) generative learning was not a significant predictor.

Table 6
Hierarchical Regression Results for Perceived Innovation

Assessment Instrument Scale	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Leader Support for Learning	.68**	.44**	.20**	.20**	.17**	.16**	.15**	.13**	.14**
Knowledge Indeterminacy		.15**	.11**	.10**	.10**	.10**	.10**	.08**	.07
Learning Latitude (Risk-taking)		.29**	.01	.01	-.10	-.02	-.05	-.07	-.08
Organizational Unity		-.03	-.02	-.03	-.03	-.03	-.03	-.02	-.02
Systems Thinking			.18**	.16**	.10**	.10	.09	.09	.09
External Monitoring			.25**	.24**	.24**	.23**	.23**	.24**	.23**
Knowledge Creation			.27**	.27**	.23**	.23**	.19**	.18**	.11*
Mgt. Learning Support				.14*	.12	.12	.09	.08	.05
Mgt. Learning-Motivation				-.04	-.08	-.08	-.09	-.06	-.04
Mgt. Performance-Effectiveness				-.05	.06	.06	.05	.03	.01
Mgt. Logistical Provision/Support				-.13**	-.12*	-.12**	-.12*	-.11*	-.11*
Internal Alignment					.16**	.15**	.16**	.14**	.06
Facilitative Structure					.06	.05	-.02	-.02	-.02
Supportive Systems						.04	-.01	.01	.01
Generative Learning Climate							.16**	.15*	.11
Promotive Interaction							-.06	-.03	-.05
Motivation/Engagement								.14**	.12**
Experiential Learning									.12**
Team Learning									.16**
Generative Learning									-.02
R^2	.46	.53	.65	.66	.67	.67	.68	.69	.71
(Adjusted R^2)	(.46)	(.53)	(.64)	(.65)	(.66)	(.66)	(.66)	(.68)	(.69)
R^2 *Change*	--	.072**	.120**	.009*	.012**	.001	.007*	.010**	.017**

* (p<.05; ** (p<.01

Conclusion

While these results are only an initial test of the instrument, they do offer initial evidence of construct, criterion and discriminant validity for the instrument. This research demonstrates that a more comprehensive learning organization assessment instrument could be developed with rigorous psychometric procedures. Significant portions of the variance in perceived learning were explained by learning organization constructs. Furthermore, significant portions of the variance in perceptions of innovation and external alignment, which are key performance drivers, were explained by learning organization constructs. While the instrument clearly needs further testing and refinement, the results are encouraging. In addition, the theoretical foundations of the instrument along with the pilot site test offer encouraging prospects for a more complete learning organization theory and empirical tests of that theory.

One limitation of this study is that the organization studied was not one that was known to be a complete learning organization. It did have some aspects of a learning organization in place as a result of prior development programs such as total quality and team oriented work. One interpretation of the regression results suggesting that constructs suggested by learning organization theory to advance learning, but not found to be significant predictors in this study, is that learning organization theory was not supported. Alternatively, these results may suggest that the organization needs to develop these areas of the organization as they represent current weaknesses. Further research in different organizations is needed to be certain which is the proper interpretation.

[1] Note: Special thanks to Victoria Marsick, Martha Gephart, and John Redding who assisted with the early phases of instrument development.

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An Empirical Assessment of the Relationship Between the Learning Organization and Financial Performance

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The concept of the learning organization has received considerable attention in the literature as firms are increasingly encouraged to leverage learning to gain competitive advantage. However, few empirical studies have examined the relationship between the learning organization concept and firm performance. To assess this association, managerial responses to the Watkins and Marsick DLOQ© instrument were obtained along with both perceptual and objective measures of firm financial performance. Results suggest positive associations between the learning organization concept and firm performance.

Keywords: Learning Organization, Firm Performance, Financial Performance

Scholars have suggested that learning may be the only source of sustainable competitive advantage. Considerable attention has been devoted to the concept of learning organizations in the past several years. Yet, there have been more thought papers on why learning matters than on the processes required to building learning organizations and their potential impact on firm performance. Despite the numerous accounts and suggestions that discuss why the learning organization concept presumably works, few concrete studies exist that clarify how it works to achieve performance improvement (Kaiser & Holton, 1998). Jacobs (1995) suggests that there are little data supporting the claim that performance improvement is directly related to the adoption of practices associated with the learning organization literature.

Other researchers are concerned that the concept of the learning organization is being "oversold as a near-universal remedy for a wide variety or organizational problems (Kuchinke, 1995, p. 307). Because many of the contributions on the learning organization to date have been descriptive and prescriptive, the need for empirical research on this concept has been articulated by several scholars (Altman & Iles, 1997; Jacobs, 1995; Iles, 1994; Leitch, Harrison, Burgoyne, Blantern, 1996). In particular, one of the major research challenges is to establish the relationships between characteristics of the learning organization and organizational performance (Iles, 1994; Leitch, Harrison, Burgoyne, Blantern, 1996).

Recent studies have begun to establish a research base that examines the dimensionality of the concept of the learning organization (Watkins, Yang & Marsick, 1997; Yang, Watkins & Marsick, 1998). However, if firms are to create learning organizations by focusing on the implementation of practices and processes that promote learning at the individual, team, and organizational levels, the linkages to improved organizational performance must be more firmly established. Therefore, the current research examines the relationship between the dimensions of the learning organization and financial performance utilizing both perceptual measures of firm performance and secondary financial data drawn from the COMPUSTAT and the *Stern Stewart Performance 1000* financial databases. Assessing the relationship between the learning organization concept and objective measures of firm financial performance represents an empirical methodology that has not been employed to date. The research also attempts to

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further validate the Watkins and Marsick *Dimensions of the Learning Organization Questionnaire©* (DLOQ) in a business context with mid-level managers as respondents.

Theoretical Framework

The theoretical grounding for this research is the Watkins and Marsick conceptualization of the learning organization (1993, 1996a, 1996b). The foundation of the Watkins and Marsick perspective is that the design of a learning organization depends upon seven complementary action imperatives: (1) create continuous learning opportunities; (2) promote inquiry and dialogue; (3) encourage collaboration and team learning; (4) establish systems to capture and share learning; (5) empower people toward a collective vision; (6) connect the organization to its environment; and, (7) use leaders who model and support learning at the individual, team, and organizational levels.

Research Questions

The study addresses the following research questions:

(1). To what extent does testing the DLOQ instrument in a different context offer further validation for Watkins and Marsick's instrument?

(2). What is the relationship between the seven dimensions of the DLOQ instrument and the perceptual organizational outcome variables as defined by financial and knowledge performance? [The DLOQ asks respondents for perceptual assessments of various measures associated with financial performance and knowledge performance].

(3). What is the relationship between the seven dimensions of the DLOQ instrument and objective organizational outcome variables as defined by four secondary measures of financial performance? [return on equity (ROE), return on assets (ROA), Tobin's q, and market value-added (MVA)]

Research Design

A mail survey methodology was employed to address the research questions. The procedures used to design the sampling frame correspond to those outlined by Dillman (1978).

Sample. A random sample of 400 mid-level managers at U.S. manufacturing firms was obtained from the Council of Logistics Management Membership listing. The selection of logistics managers as key respondents for this study was based upon the increasing role of supply chain management as a key element in corporate strategies that focus on service for the provision of superior customer value (Christopher & Ryals, 1999; Poirer, 1999; Stank, Daugherty & Ellinger, 1998). The logistics function must receive, assess, and act upon so much important customer feedback and data that firms with effective learning processes may be better equipped to provide their customers with better service. In addition, logistics managers must continuously interact with other corporate functions. Accordingly, logistics managers' perceptions of their firms' learning behaviors represent a unique platform from which to examine the dimensions of the learning organization concept and their impact on performance.

Potential respondents' firms were screened for the availability of secondary data for their firms on the COMPUSTAT database. Respondent firms from the random sample for whom data was not found on the COMPUSTAT database were replaced. Prenotification of prospective respondents is believed to increase response rates (Fox, Crask, & Kim, 1988). Therefore, each of the managers in the sampling frame was contacted by telephone to solicit his/her participation in the study. Additionally, since type of postage, the sponsorship of a university, and monetary incentives are also believed to be influential factors for increasing response rate (Fox et al., 1988), the initial mailing included prepaid return postage, a personalized letter on university letterhead, and a $2 bill as an incentive to respond. Non-respondents were contacted with a follow-up letter two weeks after the initial mailing. A total of 262 surveys were mailed and 208 completed surveys were returned resulting in a usable return rate of 52%.

Instrumentation. The DLOQ instrument (Watkins & Marsick, 1993, 1996a, 1996b) was used for this study. The seven dimensions in the Watkins and Marsick instrument are measured by 43 items. Previous research using this instrument has been conducted by Watkins, Yang and Marsick (1997), Yang, Watkins, and Marsick (1998), and Yang, Watkins, and Marsick (forthcoming). Accordingly, several stages of empirical research have assessed the psychometric properties of the DLOQ. These analyses suggest that the seven dimensions have acceptable reliability estimates (coefficient Alpha ranges from .75 to .85). The seven factor structure was also found to fit the empirical data reasonably well (Yang, Watkins & Marsick, 1998). The previous examinations of the DLOQ utilized non-random samples of 116 and 469 respondents respectively from multiple organizations in instrument development and validation studies (Watkins, Yang & Marsick, 1997; Yang, Watkins & Marsick, 1998).

Perceptual Performance Measures. The two performance outcome measures on the DLOQ instrument, Financial Performance and Knowledge Performance, ask respondents to indicate their assessments of the organization's current performance when compared to the previous year. The first performance variable, Financial Performance, is assessed in the following areas: return on investment, average productivity per employee, time to market for products and services, response time for customer complaints, market share, and the cost per business transaction. The second performance variable, Knowledge Performance, is assessed in the following areas: customer satisfaction, the number of suggestions implemented, the number of new products or services, the percentage of skilled workers compared to the total workforce, the percentage of total spending devoted to technology and information processing, and the number of individuals learning new skills.

Secondary Financial Performance Data. A database consisting of secondary measures of financial performance for the respondent organizations in the study was created with data obtained from the 1998 COMPUSTAT the *Stern Stewart Performance 1000* financial databases. Specifically, four measures were chosen to obtain a comprehensive view of firm financial performance: return on equity (ROE), return on assets (ROA), Tobin's q, and market value-added (MVA). The MVA data obtained for this study is from the *Stern Stewart Performance 1000* and is 1998 data for 1,000 firms. MVA data is quoted in a dollar amount for each firm. Since the research here includes firms with varying sizes, MVA is standardized by total assets, a proxy for firm size. The ROA and ROE measures are from the COMPUSTAT database and are listed for each company under the data items of ROA and ROE. A proxy for Tobin's q was calculated using a method suggested by Chung and Pruitt (1994). All of the data necessary to calculate the proxy were obtained from the COMPUSTAT database.

Data Analysis

To address the first research question, confirmatory factor analysis (CFA) was used to assess the dimensionality and validity of the DLOQ in a different context. The CFA was conducted with LISREL 8 (Joreskog & Sorbom, 1989, 1993a, 1993b). CFA is a procedure that examines the construct validity of an instrument with pre-specified dimensions. In this study, we are particularly interested in assessing whether, in a business context, the DLOQ measures constitute an adequate measurement model for the learning organization concept

Two measurement models were examined to assess the DLOQ in the new context: one for all 43 learning organization items, and another for a reduced set of 21 items. An earlier study conducted an extensive series of exploratory and confirmatory factor analyses where the 43-item scale representing the seven dimensions of the learning organization was reduced to a more parsimonious 21-item scale. The resulting 21-item, seven-construct model yielded superior fit indices than the original 43-item model (Yang, Watkins & Marsick, 1999).

Canonical correlation was selected to assess associations between dimensions of the learning organization and perceptual and objective measures of firm performance (research questions 2 and 3). Canonical correlation is a technique for examining the association between two sets of variables (Stevens, 1996). The underlying principle is to develop a linear combination of each set of variables (both independent and dependent) in a manner that maximizes the correlation between the two sets.

Canonical correlation was chosen over structural equation modeling (SEM) as a more appropriate statistical technique with which to explore an omnibus impact of the dimensions of the learning organization on a set of financial performance indicators. The objective was to assess overall effects of the learning organization concept on firm performance rather than causal relationships.

SEM also requires more proven measures to be used in data analysis than were available for secondary financial performance. As no one measure is able to completely describe all aspects of a firm's condition, it is important to collectively examine several different measures of performance (Brigham 1995; Peterson 1994). We selected a combination of traditional accounting and value-added indicators to reflect an adequate, but nevertheless exploratory, measure of the concept of financial performance. The canonical correlation analysis was performed by MANOVA procedure using the SPSS statistical package (Norusis, M. J./SPSS Inc., 1990).

Results of the Confirmatory Factor Analysis. Table 1 offers a comparison of the fit indices for the two measurement models. Six criterion indices were chosen to evaluate the fit between the proposed measurement model and that generated from the sample. The indices selected were the chi-square (χ^2) test, Jöreskog and Sörbom's (1989) goodness of fit index (GFI) and goodness of fit index adjusted for degree of freedom (AGFI), Bentler's (1990) comparative fit index (CFI), Bentler and Bonett's (1980) non-normed fit index (NNFI), and Steiger's (1990) root mean square error of approximation (RMSEA).

The GFI and AGFI reflect the proportion of joint amount of data variance and covariance that can be explained by the measurement model being tested. The NNFI is a relative fit index that compares the model being tested to a baseline model (null model), taking into account the degrees of freedom. The CFI indicates the degree of fit between the hypothesized and null measurement models.

The RMSEA represents a real advance in the evaluation of model fit from both a statistical and a conceptual viewpoint. Browne and Cudeck (1993) argue that because theoretical models are at best approximations of reality, the null hypothesis for any measurement/structural equation model (i.e., the conventional chi-square test that the data fits the model perfectly) will rarely be true. Rather than testing the null hypothesis of *exact fit* between the covariance matrix of sample and that of model for population, RMSEA establishes a hypothesis of *close fit* between the model and population. RMSEA values of .05 or less indicate a very close fit between sample and theoretical model, accounting for degrees of freedom. Values less than .08 reflect reasonably well fitting models (Browne & Cudeck, 1993).

Table 1. Fit Indices for Measurement Models of the DLOQ

	Measurement Models	
Fit Index	43 Items	21 Items
χ^2	3886.576	328.544
df	839	157
χ^2/df	4.632	2.093
RMSEA	.132	.073
RMSR	.083	.053
GFI	.616	.870
AGFI	.567	.808
NNFI (TLI)	581	.914
CFI	.611	.935

The CFA results for the new sample add further credence the dimensionality proposed by the DLOQ instrument developers. Specifically, the 43-item model with seven underlying dimensions fits the data only moderately, while the reduced seven-factor 21-item model forms a reasonable measurement model (RMSEA < .08). The proposed seven dimensions of the learning organization account for eighty seven percent of item variances and covariances (GFI = .87). Both the NNFI and the CFI are above the .90 level, indicating that the seven-dimension structure fits the data very well in comparison to the baseline measurement model.

Table 2 presents reliability estimates for the full and reduced set of items for the DLOQ. The reliability estimates do not decrease substantially when the number of items is reduced by half (with the exception of Continuous Learning). These findings suggest that the full and reduced set of DLOQ measures continue to demonstrate acceptable reliability in the new context.

Table 2. Reliability Estimates for the DLOQ Measures

Subscale	Original 43 Items		Reduced 21 Items	
	Number of Items	Coefficient Alpha	Number of Items	Coefficient Alpha
Continuous Leaning	7	.81	3	.60
Dialogue & Inquiry	6	.86	3	.78
Team Learning	6	.85	3	.77
Embedded System	6	.85	3	.75
System Connection	6	.87	3	.80
Empowerment	6	.84	3	.72
Provide Leadership	6	.89	3	.87
Financial Performance	6	.75	3	.68
Knowledge Performance	6	.80	3	.71

Results of the Canonical Correlation Analysis. Table 3 shows the results of the canonical correlation analyses between dimensions of learning organization and the perceptual and objective financial outcome variables. Because our primary purpose was to examine the associated variability between the two sets of variables, rather than the structure of the variables, our discussion focuses on the overall effects of the canonical correlation analyses.

The multivariate tests suggest a statistically significant relationship between the seven dimensions of the learning organization and the two perceptual outcome variables: Financial Performance and Knowledge Performance ($p < .001$). Effect sizes of the canonical correlation range from .246 to .312, indicating that more than a quarter of the variability in the respondents' perceptions of organizational performance can be accounted for by the seven dimensions of the learning organization.

The canonical correlation between the seven dimensions of the learning organization and the four secondary measures of financial performance (ROE, ROA, Tobin's q, and MVA) is also statistically significant ($p < .05$). Moreover, different multivariate statistics reveal consistent effect size, ranging from .104 to .108. Thus, more than ten percent of the variance in the four financial indicators can be explained by the dimensions of the learning organization measured on the DLOQ.

In summary, our analyses offer support for the validity of the DLOQ instrument using a random sample of respondents in a business context. In addition, the results suggest a positive association between the learning organization concept and firm performance.

Table 3. Multivariate Tests of Significance for Canonical Correlation

Test Name	Value	Approx. F	Hypoth. df	Error df	Sig. of F	Effect Size
Test for Two Perceptual Outcome Variables						
Pillais	.492	6.611	14	284.00	.000	.246
Hotellings	.908	9.084	14	280.00	.000	.312
Wilks	.519	7.827	14	282.00	.000	.280
Roys	.470					
Test for Four Secondary Financial Variables						
Pillais	.414	1.635	28	396.00	.024	.104
Hotellings	.485	1.638	28	378.00	.023	.108
Wilks	.639	1.641	28	347.56	.023	.106
Roys	.186					

Implications and Recommendations for Research and Practice in HRD

The increased emphasis on and examination of individual, team, and organizational learning practices have stimulated tremendous interest in the concept of the learning organization. Although the concept is fairly well established, it is still evolving and a certain amount of confusion and ambiguity surrounds it (Leitch, Harrison, Burgoyne & Blantern, 1996). Watkins and Marsick's (1993, 1996a, 1996b) DLOQ instrument studies have shown moderate evidence of construct validity for the scales measuring the dimensions of the learning organization. However, the researchers have acknowledged that additional studies are needed to cross validate the instrument with different populations of organizations and with larger samples in order to more firmly establish its utility and validity. This study further validates the instrument in a new context.

From an empirical perspective, the relationship between the presence and development of practices associated with the learning organization concept and organizational performance has not been adequately established.

To assess this association, the current research integrates objective measures of firm performance obtained from the COMPUSTAT and the *Stern Stewart Performance 1000* financial databases. This aspect of the study represents a unique methodology that, to date, has not been employed studies associated with the learning organization concept. Accordingly, our research findings suggest that the learning organization concept may positively associated with firm performance. Future studies should further investigate these exploratory results using a wide variety of financial indicators in different contexts.

There are several limitations associated with this research. The sample, although randomly drawn, included only firms for which secondary data was available. Different results may have been obtained if smaller, privately-owned firms were also included in the sample. This study includes only a limited number of secondary financial performance measures to assess the relationship between the dimensions of the learning organization construct and financial performance. The inclusion of other financial measures may have yielded different results. Perceptions of upper-level managers and front-line employees were not solicited for this study. It is possible that different results may be obtained by soliciting a larger, more holistic sampling strategy within each firm to assess the organization relative to the DLOQ. Each of these limitations, however, represent opportunities for future research in this area.

In conclusion, it has been acknowledged that creating learning organizations requires new roles for managers, human resource developers, and employees in building the capacity for learning at the individual, team, and organizational levels. Yet, there has been little empirical research to support the claim that performance improvement is related to the adoption of practices associated with the learning organization concept. Our exploratory research lends credence to the efficacy of the learning organization concept by suggesting that there may be a positive association between the learning organization concept and firm performance.

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Translation, Validation, and Adaptation of an Instrument to Assess Learning Activities in the Organization: The Spanish Version of the Modified "Dimensions of the Learning Organization Questionnaire"

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This paper shares methodology and reports findings from a translation, validation and adaptation study of the Dimensions of the Learning Organization Questionnaire (DLOQ). Results indicate that the Spanish version of the DLOQ seems to be a valid instrument to assess learning activities in organizations with Spanish speaking populations, especially those of Latin America.

It can hardly be denied that technology, along with science, has historically been among the central engines of modernity. It is equally undeniable that the modern world is increasingly becoming a technological world. Technology is, by all indications, going to become the distinguishing feature of global culture in the coming decades. The business literature generally refers to at least three types of technology: product, process and management. Product technology is the knowledge used to produce any product - the information that specifies the product's characteristics and uses. Process technology is the knowledge used in production to organize the inputs and operate the machinery. It relates to processes by which a given product or service is produced. Management technology is the knowledge used in operating a business--the managerial skills that enable a firm to compete by using its resources effectively. Management innovation, like product and process innovation, depends on new technology. New technology for management, as for engineering, comes in the form of new knowledge, tools and methods (Stata, 1989).

A country cannot develop a highly productive network of production in manufacturing, agriculture, transportation and communication, or other sectors except by a progressive evolution of an industrial structure in which technological advances play a fundamental role. If a country's advance in technology continues long enough, it will probably reach a stage at which here and there, in one field or another, it develops technologies beyond those known in the most advanced countries. Until it reaches this stage, its technological advance will consist in large part of the adaptation of technologies already in use in the technologically advanced countries. This process is described as the "transfer" or "transmission" of technology from the developed countries (DC's) to the less developed countries (LDC's) (Hagen, 1980).

The transfer of technology from the technologically developed world is a vital approach to bringing sophisticated technology to an LDC. Technology transfer is an important medium for generating a more efficient modern technology in a developing country. In this case, transfer of technology involves taking some equipment, techniques, and practices developed in some technologically advanced country to some LDC. The assumption or anticipation is that the local people in the developing country, will be able to acquire the techniques transferred to them. Acquiring techniques means being able to learn, understand, analyze, and explain the whys and hows of those techniques. It is also anticipated that the local technologist, who is the beneficiary of the transferred technology, will be able not only to adapt the received technology to suit the needs and circumstances of the developing country, but also to build on it and to use it as an inspiration to create new technologies appropriate to the development requirements and objectives of the developing country.

There has been a widespread belief among developing countries that unless technology is properly transferred from the more industrially advanced countries, there could never be an adequate industrial and economic development in general. Latin American countries have long recognized a need to use and adapt foreign technology to local conditions, and to generate indigenous products, processes and practices (Marton, 1986).

Industrial development has been the objective of most development programs in Latin America since the turn of the century. Although such development was often implicit rather than explicit in national efforts, the model of development has been based on industrial growth complemented by manufacturing, agricultural investment, and extraction of basic minerals. Many promising developments have been truncated by profound crises that have affected Latin American economies through the years. During the 1980s, for example, the entire region was plunged into deep recession and stagnation. Unprecedented inflation, unemployment, devaluation, and a sky-high foreign debt afflicted the region (World Press review, 1988). Compounding these economic problems was the dramatic political turmoil that ripped Latin American economies apart. Although some problems still remain, Latin

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American countries are currently experiencing a revival brought about by new leadership and powerful external factors. A new generation of leaders are leading the states into progressive economic programs, are advising their governments, initiating proposals for deregulation, and encouraging greater regional integration (Clerc, 1990; Baker & Weiner, 1992). External factors have also been a major trigger of the ongoing reforms. The trend toward globalization of markets has forced Latin American countries to replace their old economic thinking. The strengthening position of regional blocks and the emergence of newly industrialized countries have resulted in a more diverse and fierce competition all over the globe, and most leaders in the region are starting to realize the dangers of being left out (Graham, 1990). In order to carve a position in this global economy, Latin America with a market of about 450 million people, an estimated gross domestic product (GDP) of US $900 billion (1990 figures), and abundant human and natural resources, is being forced to implement long overdue changes in their economic and trade policies as well as to take initiative to foster the role of science and technology in economic and social development. Specific policies on the importation and the local development of technology have been adopted in many Latin American countries, particularly in Argentina, Brazil, Mexico and the Andean Group (Peru, Venezuela, Ecuador, Colombia and Bolivia).

Recent studies suggest that the key to success for an organization is embodied in its ability to implement and appropriate new technology (Willmann, 1991). However, adopting new technology does not ensure its successful integration and its optimum use. A company must be able to adjust to the demands and opportunities the new technology creates in order to realize its full advantage.

There is no simple formula for making the changes required to fully exploit a new technology. Indeed, every organization is unique and must identify and implement the changes required to enhance its own effectiveness. Argyris and Schon (1978) describe this process of identifying and implementing required changes as organizational learning. They suggest that an organization is, at its root, a cognitive enterprise and it learns and develops knowledge. The concept of a learning organization has evolved from the ideas of organizational learning, but it differs in that it includes not only the learning of the organization, but learning within the organization (Ulrich, Von Glinow & Jick, 1993). Learning organizations create intentional processes that accelerate the creation and utilization of knowledge across the system (Marsick & Watkins, 1997). Watkins and Marsick (1993; 1996)delineate the learning organization as one that captures, shares, and uses knowledge to change the way the organization responds to challenges. They describe seven dimensions or action imperatives necessary for organizations to progress toward becoming a learning organization: create continuous learning opportunities (*Continuous Learning*), promote dialogue and inquiry (*Dialogue and Inquiry*), promote collaboration and team learning (*Team Learning*), empower people toward a collective vision (*Empowerment*), establish systems to capture and share learning (*Embedded System*), connect the organization to its environment (*System Connection*), and provide strategic leadership for learning (*Provide Leadership*).

These action imperatives form the basis for the Dimensions of the Learning Organization Questionnaire (DLOQ), a survey developed by Watkins & Marsick (1997) to assess learning activities in the organization. Watkins and Marsick added also additional items to the survey in order to measure *Knowledge Performance* which is defined as: Enhancement of products and services because of learning and knowledge capacity; and *Financial Performance* which is defined as: State of financial health and resources available for growth. Several studies have already established reliability and content and predictive validity of the DLOQ with and without knowledge and financial performance scales (Watkins, Selden, & Marsick, 1997; Watkins, Yang, & Marsick, 1997; Yang, Watkins & Marsick, 1998; McHargue, 1999; Watkins & Marsick, 1999).

In the context of this study, a learning organization is defined as the ultimate goal of a process that promotes continuous learning at the individual, group, and organizational levels in order to modify behavior and positively impact the organization's ability to deal with the change that a technology transfer process brings about. The major premise is that those organizations which develop as learning organizations are better at adapting to change (Kline & Saunders, 1993; Marquardt & Reynolds, 1994; Nonaka & Takeuchi, 1995; Senge, 1990; Swieringa & Wierdsma, 1992; Watkins & Marsick, 1993, 1996; Marsick & Watkins, 1999).

Much has been written to convince companies of the benefits of developing themselves as learning organizations, but little has been offered in terms of assessment tools and empirical data, particularly in a Latin American context. The DLOQ is a useful instrument that has consistently produced acceptable results in the United States, and may be used extensively in the areas of human resource and organizational development in Latin America. Hence, this study sought to translate, validate, and adapt the 7 dimensions of the learning organization and the knowledge performance scales so that could be used with Spanish-speaking populations. A method based on the four basic translation methods described by Brislin (1976, 1980) combined with additional activities was used, which consisted of 1) forward-translation, 2) assessment of forward translation for clarity, common language and cultural adequacy, 3) back-translation, and 4) assessment of back-translation for conceptual equivalence.

According to Brislin, Lonner and Thorndike (1973), "Unless researchers present empirical evidence to support their claim that different language versions of the same instrument are equivalent, translation problems will always be plausible rival hypotheses for any obtained results" (p.32). The equivalence of measurements is therefore one of the central problems of cross-cultural research (Hui & Triandis, 1983). If equivalence of translation can not be demonstrated between translations, it remains uncertain whether any differences noted between subjects could be attributed to differences in item translation, whether the translated scales are comparable to the original scale, and whether differing translations are equivalent in constructs addressed.

Methods

Sample

In the present study, a purposive, non-random sample was used. The target population was medium to large size private manufacturing corporations located in Bogota, Colombia. The decision to choose this country was based on the following criteria:

a) It is a Spanish speaking country.
b) Lists of population elements from which a sample may be drawn were available
c) Personal contacts were available.
d) This country is a member of the most important trading block of the region: the Andean Pact.

Furthermore, Colombia is one of Latin America's top performing economies. With a population of 36 million people. Despite the fact that the mere mention of its name conjures up images of guerrilla movements wreaking chaos, Colombia has had positive economic growth every year since 1948, has a history of stable exchange rates, and has never experienced a period of hyper-inflation, has never defaulted on its sovereign debt obligations, and never asked to reschedule its payments. In addition, the Colombian military has a history of non-intervention in internal politics and Colombia has always respected foreign ownership. These positive points indicate that the Colombian market is one in which foreign and indigenous organizations have had and still have a real chance to develop and succeed.

To be included in the sample, a company would have to meet several criteria: it must be 1) private, 2) engaged in manufacturing operations, 3) medium to large size (number of employees was the only metric used to determine its size.), and 4) be or have been a target of any form of technology transfer in the last 10 years.

Once the target population to be sampled was determined, the availability of a list of population elements from which a sample may be drawn was assessed. In an international context, this frequently presents difficulties due to the paucity of information available on industries, business, or consumer groups in other countries. Even where sampling frames, such as electoral or municipal lists, directories, telephone books, or mailing lists commonly used in the United States are available, they frequently do not provide adequate coverage, particularly in less-developed countries, and hence, give rise to frame error. Worldwide or regional lists of manufacturers can be obtained from sources such as Bottin International. This source registers names and addresses of more than 300,000 firms in 100 countries, under 1,000 product classifications, by trade and by country.

In this particular study, two lists were used: a) The Latin American Companies Handbook, b) Latin America 25,000/Dun & Bradstreet's key business directory. Thirty companies enlisted in both lists were selected and then information about the company itself was drawn. Initial contact with the company was by e-mail to the executive director, explaining the study and requesting authorization to survey employees at different levels within his/her organization. The names and a brief background of trained personal contacts in Bogota who were in charge of follow-ups on behalf of the researcher were given. Following this first contact, a hard copy of the electronic letter with a sample of the questions included in the SDLOQ was faxed to the same executive. The follow -up was done via telephone by a trained personal contact residing in Bogota, who coordinated and consulted with the researcher over the companies concerns via e-mail. Eight companies agreed to be part of the study. Data collection was done on site. The SDLOQ was distributed and administered directly by the researcher and a total of 906 valid responses were properly collected.

Forward Translation

The initial translation of the DLOQ from English to Spanish was performed by male and female bilingual translators whose mother tongue was the target language. The female translator was known to the researcher for her expertise in translation of documents and technical information. This individual is a professional translator, fluent in both languages and a lifelong member of the Latin American community in which the study was going to be conducted. The male translator was the researcher who is Peruvian-American, fluent in both languages and familiar with several Latin American cultures. Prior to beginning the translation procedure, explicit information regarding the use and intent of the DLOQ instrument was given to the female translator. Initial instructions included a request to avoid focusing or centering on the use of Spanish terminology when completing the initial translation, to use common Spanish equivalents for all words and phrases, and to translate the original text as closely as possible.

Assessment of Forward Translation

The Spanish translations provided by the translators were then presented to a panel of four additional Hispanic individuals, with advanced degrees in different disciplines, knowledgeable of many Latin cultures, and originally from Argentina, Colombia, Peru and Venezuela. These individuals were asked to independently review each item of both translations and to choose the one which they judged to be the best in terms of clarity, i.e. the item must express a single idea, should not contain ambiguous terms, should be easy to read and understand; common language, i.e. the item is expressed with language used by the general population; and cultural adequacy, i.e. the item is appropriate and relevant for the culture for which it is being adapted. Following a discussion and agreement among the participants, a consensus translated version was developed consisting of item versions picked out from one or the other translation or a newly generated item.

Backward Translation

The consensus Spanish translation was then presented to an additional Hispanic bilingual proficient in both languages. This individual was requested to back translate the Spanish translation to English and to identify any corrections in grammar, word usage, or diacritical markings deemed necessary in the Spanish translation provided. The translator was an Argentinean-American female, whose native language was Spanish and who held a Bachelor's degree in English and a Master's degree in Spanish Linguistics.

Assessment of Backward Translation

Following this step, the back translation was reviewed by a panel which consisted of one of the developers of the DLOQ, a methodologist, and the researcher. The review process focused on the conceptual equivalence with the original version of the DLOQ. Item by item was reviewed and decisions on equivalence were based on the following options: a) both the wordings and the meanings have nothing to do with each other; b) the wordings are equivalent in some respects but they do not capture the same meaning; c) the wordings are not equivalent but they capture the same meaning; and d) the wordings are equivalent and capture the same meaning. Ninety five percent of items were found to be conceptually equivalent, 2 modifications in wording of the Spanish translation were proposed until an acceptable compromise was reached and a final version was approved.

Results

The translation technique used in this study aimed at putting the DLOQ in Spanish while preserving the same ideas across the linguistic and cultural boundaries. Item equivalence and conceptual equivalence was established by comparison of meaning between original and back-translated forms and comparison of meanings between the original and translated form, by bilinguals other than the translator (Brislin, et. al., 1973). It should be reported, though, that some conceptual discrepancies were identify in the back translated version of the instrument due to the meaning of the words "trust" and "empower." In the forward translation the word "trust" was translated as "confianza" and "empower" as "autorizar." Obviously, when these words were back translated they resulted in "confidence," which is different from "trust" and "authorize" which is different from "empower." Cultural considerations were necessary to consider in order to arrived at an agreement in terms of conceptual equivalence. This process was expedited due to the fact that the researcher is a native Spanish speaker, culturally indigenous (emic), and familiar with the theoretical underpinnings of the instrument in question.

Statistical Analysis

Cronbach's Alpha coefficients for each dimension of the scale ranged from .791 to .835 on the SDLOQ. Overall, the reliability estimate for the entire scale is .960 for the 49 item version of the translated instrument. Table 1 below reports Alpha coefficients for each scale of this study (N = 906) and for previous USA studies. In all but except one case, the reliability estimate was comparable with the American studies. It appears that the Team Learning construct is not as tight a construct as it is in America or maybe, we could argue, that the reliability of this construct is curvilinear as the sample size increases. These Alpha coefficients, which are evidence of construct validity, suggest that the SDLOQ is a reliable instrument.

Table 1. Scale Reliability Scores

	American Studies			Colombian Study
Scale Names	Alpha (N = 68)	Alpha (N =191)	Alpha (N = 469)	Alpha (N = 906)
Continuous Learning	.74	.82	.79	.80
Inquiry & Dialogue	.78	.87	.85	.81
Team Learning	.88	.86	.84	.79
Embedded Systems	.86	.85	.79	.81
Empowerment	.83	.85	.82	.81
Systems Connections	.76	.85	.75	.80
Provide Leadership	.83	.83 (N = 74)	.86	.84
Knowledge Performance	.82	.78 (N = 61)	.74	.82

Predictive validity refers to the extent to which the instrument scores predict criterion measurement (Crocker & Algina, 1986). It is reasoned that the measurement's predictive validity will be shown if scores on the dimensions of the learning organization can successfully predict knowledge performance. In order to determine the predictive validity of the SDLOQ in terms of knowledge performance, multiple regression analysis was conducted where the measure of knowledge performance was designated as a response variable and scores on seven dimensions of learning organization were treated as predictor variables. The regression analysis results indicated that the multiple correlation between learning activities measured on seven dimensions of the SDLOQ and the measure of knowledge performance was statistically significant ($p<.001$). The estimated multiple correlation coefficient was .616 and the R-square was .380. This means that 38 percent of the variation in knowledge performance can be explained by the organizational learning activities measured on the SDLOQ. That is to say, the SDLOQ showed strong predictive validity in predicting knowledge performance in the organization. Table 2 below reports the R-square for this and previous studies.

Table 2. R- Square

Study	Watkins et al., 1997	Yang et al., 1998	McHargue, 1999	Present
Sample Size	64	469	246	906
R^2	.324	.63	.260	.38
p<	.05	.01	.01	.001

Conclusions

The SDLOQ has revealed similar characteristics, in terms of statistical properties, to the original; in fact, in some instances, results have been even better than those registered with the original one (e.g. Cronbach's Alpha). Therefore, and as with the original scale, the SDLOQ seems to be a valid instrument to assess learning activities in organizations with Spanish speaking populations.

The present study has provided Latin American researchers and HROD practitioners with a Spanish version of the Dimensions of the Learning Organization Questionnaire (SDLOQ), an instrument that will assist them in generating data to assess the actual state of Latin American organizations with respect to the goal of becoming learning organizations.

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Kaizen Blitz: Rapid Learning to Facilitate Immediate Organizational Improvement

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Rapid and dramatic improvements in the organizational performance of a manufacturing firm after use of a series of kaizen blitzes are documented in this case study. Participants in these blitzes along with other employees and managers describe their experiences and the quantitative and qualitative results from these blitzes. A preliminary analysis of the theoretical basis for a successful kaizen blitz is offered with suggestions for future research and development of a theoretical framework.

Keywords: Adult Learning, Continuous Improvement, Employee Involvement

Conventional wisdom about organizational change, quality improvement, and maintenance of productivity is being turned upside down by current events affecting how business is done in the United States and globally. Rather than being a passing fad, these conditions, only dreamed about a decade or less ago, foretell a future of increasingly changing markets, flexible organizations, and rapid, if not instantaneous, response to continually fluxing global conditions and needs. This study examines the use of kaizen blitz as an answer to present and future requirements for rapid change, new ways of doing business, and continuing needs for employee identification with both quality processes and products. This case study of a small manufacturing firm in northeast Ohio provides a platform for understanding how the kaizen blitz process works as well as providing concrete results of improvements in productivity, quality, and employee morale.

Kaizen comes from Japanese approaches to promote quality in the workplace. As defined by Imai (1986), kaizen means improvement(*kai*=change, *zen*=for the better) and requires continuous improvement for all aspects of an organization, both management and workers at all levels. A kaizen blitz is a specific focus of these ideas on a particular problem in a short time frame of one to five days.

Classical notions about producing lasting changes in work organizations are described in minimum time frames of years, often three to five. With the advent of instant communication via new technological advances and concomitant revisions of the market place from local to world wide in less than a decade, firms must readily adapt to change. Kaizen blitz is an applied strategy, based on quality principles that can create rapid change, improved quality, and increased productivity in time frames of hours and days instead of months and years.

Use of kaizen change strategies in American and global business is not new. Total Quality Management, Just in Time Manufacturing, Quality Function Deployment, Continuous Improvement, are examples of such attempts to incorporate "quality" and kaizen practice. These have had only moderate success, however; failure to produce desired results exceeds successes (Hoffher, Moran, Nadler, 1994). The literature suggests reasons for frequent failure of these highly touted approaches: short term thinking, lack of management commitment, inability to train employees in a timely manner, poorly conceived implementation strategies, and unclear goals (Hoffher et al., 1994; Schonberger, 1982). The "blitz" integrated with kaizen may overcome many of the problems associated with implementation of the broader based kaizen approaches.

Research Problem

Bringing about successful change in business organizations has been a recurring source of interest and study. Similarly the study of leadership and organization development is largely focused on issues of change and productivity. The recent focus on "quality issues" is integrally related to change. Advocates for "quality" interventions such as TQM have described this as a process that incorporates change management. Unfortunately, in a majority of American cases the adoption of TQM or other quality programming has not resulted in significantly

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improved practice, particularly when change is required. While there are many answers to why the problems and issues surrounding organizational change remain, the fact is organizations continue to need help in this area, particularly with issues around productivity, quality, and employee acceptance of change. Kaizen blitz holds a promise of responding to the problems described in this paragraph by offering a strategy that incorporates many "quality" features while appearing to avoid pitfalls of older, more touted methods for change.

This case study of the use of kaizen blitz examines the process of conducting a blitz, as well as how the participants experienced the process and what effects or results were seen as a direct result. The research question was, How does kaizen blitz affect productivity and quality in a manufacturing setting?

The experience of kaizen blitz is told by those who experienced this process and by one of the facilitators of the blitz. Group and individual interviews were used to collect data from study participants. The questions asked are:

What did you experience?
What was different about your experience with kaizen blitz compared to your prior operating experience?
What are results for you personally and for the firm?
How have "quality" processes been affected by kaizen blitz?
How have management and employee attitudes changed since kaizen blitz?
What has been learned from this experience?

Theoretical Foundations

Organizational Performance

Since the early 1980's, prescriptions to improve organizational performance have typically focused on: Continuous improvement or kaizen (Imai,1986), employee involvement (Crosby, 1979), quality management (Feigenbaum, 1983; Deming, 1986), and customer focus (Ishikawa, 1986). In some form these elements are combined and labeled Total Quality Management, Continuous Quality Improvement, High Performance or similar terms. In essence they are all ways to improve the quality of products and services offered and improve the productivity of organizations (Lindsay & Petrick, 1997). Successful use of these approaches requires initiation and sustaining organizational change and organizational learning (Senge, 1990; Hoffher et al., 1994; Herron, Meyer, Bohan, 1997). Many organizations choose a deliberate and lengthy approach to initiate and sustain change that supports organizational improvement. When used, this approach consists of extensive planning and training of employees before improvement initiatives are begun (George & Weimerskirch, 1994; Soin, 1998).

This approach of extensive planning and education before starting actual improvements has had mixed success in launching and sustaining organizational improvement (Tunks, 1992; Hoffher et al., 1994). The reasons for failure include lack of management commitment and involvement (Tunks, 1992), focus on quality improvement methods to the exclusion of selecting important things to improve (Hoffher et al., 1994), and measurement of success by the amount of training conducted instead of actual improvements achieved (Herron et al., 1997). The most successful efforts have incorporated sustained leadership commitment and involvement, appropriate planning and employee training, and demonstrated tangible improvement results within a short period of time (Tunks, 1992).

Adult Learning Principles

The concept of andragogy as described by Knowles (1980) includes assumptions that adult learners have rich experience and knowledge they enjoy using to build new information upon, a desire to apply learning to current situations, immediate use of learning, and enjoyment of active learning processes that also allow them to be supportive of other learners. Adults are more likely to engage willingly in learning activities when the content is meaningful to them (Merriam & Caffarella, 1991). In contrast, in the typical workplace, the predominant forms of adult learning have been structured, classroom based activities, more instructor directed than learner centered (Marsick,1988). This description of typical adult learning in organizations appears to fit Knowles' description of pedagogy and a "school based " atmosphere that is less likely to interest or promote learning (1980). Pratt (1988) suggests adults, in need of direction to learn an entirely new concept, should be taught from a teacher directed basis whereas those needing only moderate levels of direction and support should be approached from a learner directed approach. During a kaizen blitz both traditionally instructive and facilitative roles are needed to both introduce new concepts and facilitate participant use of these concepts.

Kaizen and Kaizen Blitz

Kaizen is a Japanese term that means continuous improvement by managers and workers to improve organizational performance (Imai, 1986). Improvements are intended to be ongoing in all aspects of performance such as quality, productivity, and employee morale and well being (Herron et al., 1997). Kaizen for the Japanese represents both specific actions to improve and a philosophy of never ending effort to make things better in organizational and personal life (Imai, 1986). The Japanese term kaikaku means dramatic improvement in a short time or revolutionary change. A kaizen blitz may be described by this concept of dramatic, quick change that accomplishes immediate, rapid improvement in a short time.

During a kaizen blitz the instructor teaches basic problem solving and quality improvement techniques and then facilitates immediate participant application of these techniques to the specific improvement need. The techniques used typically include the Plan, Do, Check, Act cycle, also called the Deming cycle (Shiba, Graham, Walden, 1993). This cycle includes: selection of an improvement focus for the blitz, data collection and analysis of causes of shortcomings (Plan), creation and implementation of a solution (Do), evaluation of results (Check), and standardization of accepted solutions or a return to the Plan stage for ineffective solutions (Act). Participants are taught to use tools such as cause and effect (fishbone) diagrams and Pareto charts on a just-in-time basis where they can immediately apply them. Blitz participants are able to experiment and try solutions as they think of them until they find a solution that works. Participants use their knowledge and experience throughout the blitz process in conjunction with new skills they acquire from the facilitator/instructor. Both management and non-management employees participate in the blitz as a team. The only assigned work for the team is the blitz during a 1-5 day period.

Case Study Methodology

Company Background and Need for Assistance

To fully understand the results of kaizen blitz activities from the focus company of this study, a brief history of the company is offered. The history is followed by a description of blitz activities and data gathering that gained perspectives of company employees about the effect of these blitzes. This company manufactures circuit boards to control gas flow to certain types of heaters. The company has employed between 90-150 people at various times in recent years and is owned by a larger corporation.

A Steering committee had been formed to investigate and select a methodology that would help the company improve quality and productivity. The committee consisted of the operations manager, materials manager, production planner, and a production supervisor. Members of the Steering Committee indicated they were keenly aware of the need for adjustment and improvement in how products were produced. They also knew that past efforts at improvement had yielded little benefit to either productivity or to quality. Their experience with outside consultants had not produced improvements; there was noticeable tension and conflict between departments responsible for production. Generally the Steering Committee members were skeptical about both the process and the likelihood of positive results from any proposed improvement activity.

In response to an invitation from a local productivity improvement center (Work in Northeast Ohio Council or WINOC), the Steering committee attended a program that explained the kaizen blitz process and featured a company whose representatives shared their story of dramatic improvements using this approach. The committee felt an immediate and dramatic improvement from a kaizen blitz would demonstrate to their company that change was possible and create confidence among the staff to attempt further improvements. Contact was made with WINOC to secure the services of two facilitators and an initial kaizen blitz was scheduled for April 1999. One of the facilitators was a co-author of this paper; the other co-author later interviewed employees to gather data for this article.

Initial Kaizen Blitz

The initial blitz team consisted of 12 members chosen from management and non-management employees. A cross section of departments and disciplines was represented. The focus or theme of the initial blitz was to increase the quality of circuit boards during initial production and reduce a high amount of rework necessary to make boards meet quality standards. During day one of the blitz, facilitators explained the purpose of the blitz, how the team would function together, and explored concerns and questions of participants. Some participants were skeptical about their involvement with the blitz. Facilitators also presented information about effective manufacturing principles and secured the team's agreement as to the importance of pursuing this improvement task. The team agreed there would be no "rank" among members for purposes of decisions or sharing information and consensus would be the method for decision making.

On day two of the blitz, facilitators introduced techniques such as use of cause and effect diagrams, Pareto charts, and brainstorming to participants. The team immediately applied these tools to the problem at hand to determine causes of shortfalls and create solutions that addressed these shortfalls. Later on day two, participants began experimentation to test the effectiveness of possible solutions. The facilitators encouraged and assisted participants to use their knowledge and experience to determine and prioritize problem causes, verify data that supported suspected causes, brainstorm possible solutions, and verify effectiveness/ineffectiveness of proposed solutions.

On day three, steps were taken to begin implementation and standardization of successful solutions and to try other solutions for those proven ineffective the previous day. Day four was devoted to planning necessary follow up to complete implementation, standardization, and adoption of successful solutions. The final activity on day four was a presentation to the company president and other managers of the results of the blitz.

Beginning in June 1999, three additional blitz activities were conducted that focused on reduction of production time for a high volume product, reduction in production time of a particular module, and reduction of indirect production time. The same two WINOC facilitators assisted with the second blitz, one WINOC facilitator and a company representatives facilitated the third blitz, and company facilitators facilitated the fourth blitz. All blitzes used the same process as described for blitz one, each team had a mix of new and experienced participants.

Top Management Support

During all blitz activities top management supported the process by:

- Providing coverage of participant jobs during each blitz
- Allowing active experimentation to test solutions, accepting failure as a learning experience, and encouraging non-participants to cooperate with team members during experiments
- Agreeing to immediate steps with no "red tape" to speed implementation of solutions
- Explaining to non-participants why changes had been made to familiar processes and equipment so resistance by non -participants would be minimized
- Engaging knowledgeable, outside facilitators to start the kaizen process
- Active follow up for actions that helped implement and standardize solutions
- Demonstrated interest in and moral support for the process overall, including participation by a senior manager (operations manager) in several blitzes

External facilitators served as models for company representatives to learn the facilitation process for kaizen blitzes. At various points in time the facilitators served in more traditional instructive roles to acquaint team members with new concepts. New ideas were introduced on a "just-in-time" basis as they were needed and would be immediately applied. As soon as possible, however, the facilitators assumed a helping role and encouraged participants to use their experience and knowledge to effect changes.

In December 1999, the co-author who had not facilitated the earlier blitzes visited the company and conducted interviews with a variety of employees and managers to gain their qualitative perspectives about the effects of the blitzes. He also requested and was given quantitative data as to improvements in quality, productivity, and other important indicators of company performance. The results of this data collection are detailed in the results section.

Results

A group interview was conducted with the kaizen blitz Steering Committee. Individual interviews were held with the chief engineer, a line worker, the quality control group leader, a quality control auditor, a production group leader, a manufacturing engineer, and a long term temporary line worker who had not been involved directly in any of the blitzes. Length of employment of those interviewed ranged from 25 years to 3 years.

How did you experience the blitz?

An engineer commented, "We should have done this all along. Having a cross functional team involved was a major issue and very helpful. This was an engineering approach; very analytical." A team leader stated, " I knew what was going to happen. We needed to develop a new set of standards." A line worker did not know why she had been selected to be involved and said very little during the first day, but by the end of the blitz indicated she was actively involved and rather vocal about her ideas for improvements. "My self esteem was improved. My participation was important. I came up with the idea to use the racks." The quality control auditor reported being a careful observer and talking with people. "Before the blitz process we would not typically follow through with an idea." An engineer spoke, "I waited for them (line workers) to tell me. I listened to what the line members were doing." The temporary line worker noted a definite improvement in both productivity and in pride in workmanship.

What was different about your experience with kaizen blitz compared to your prior operating experience?

A group leader noted, "We were all equal. We attacked the problem from all angles. We looked at many ideas before taking action." An engineer spoke up, "This was the first time we had involved line workers. This bottom up approach was different." Another engineer said, "People from different groups had to work together. We divided into small teams to study and measure components of the job and gather results." A line worker added, "I was afraid of management before; we got to meet these people and we could communicate. I learned that management could be open to our ideas." Another group leader offered, "Before someone would tell us what to do; now they ask people on the floor."

What are results for you personally and for the firm?

Measurable Results:

A clear result of the blitz process has been a commitment and awareness of the value of collecting data about how products are made and about indirect process issues related to quality and worker satisfaction. The following were indicative of improvement in productivity and quality:

- On time delivery is up. In one year units delivered late decreased from 11,402 to 423 units. This is an improvement of 96 percent.
- Personnel costs and numbers are down over a year ago. Personnel needed to produce the same number of units has decreased from 97 to 64 workers, a decrease of 34 percent in one year.
- Units with some form of defect have decreased from 14 percent prior to the blitz to 8 percent less than one year later. This is a 57 percent improvement
- Time required to fill orders is down. A year ago an order took 21 days to fill; now this takes four days. This is a reduction of 81 percent.
- At one time 130 employees were required to produce 5000 units per week; this compares to the current 64 employees producing 8,500 units that are more complex than the earlier products.
- Turnover is down.
- Overtime is markedly less, changing from 58 hours for a three month period to 2.5 hours for a similar period following the blitz. This is a 96 percent reduction in overtime.
- Employee satisfaction is up.
- Dollar value of inventory has dropped 22.5 percent.

Perceptions of Qualitative Change

Interviewees report there is greater cooperation, more data collection, greater communication between the floor and other departments, better control of production, agreement about quality standards, more questioning of each other and across departments/functions. In describing the blitz, the following words and phrases were used: "intense, time consuming, really proud, we were the experts, experimental ("we tried out our ideas"), manageable, fantastic, focus on immediate change, and small scope."

How have "quality" processes been affected by kaizen blitz?

An engineer stated, "Communication and cooperation have absolutely improved. They communicate openly with us." A group leader added, "Quality has increased. This brought departments closer together. Communication between departments is easier." Another group leader commented, "We work as a team. Before people fought with each other. We have better communication on the floor." A line worker reports, "Our improvements were tremendous. We eliminated errors. We are cross trained without a group leader." A quality control auditor reported, "Cross functional blitz teams allowed us to break communication barriers." An engineer spoke up, "We were asked to think of something new and try it. We can cut time in half. Quality control and production are working together." And a line worker without direct blitz involvement said, "I see an enormous change. My production has gone up." The operations manager indicated "we accomplished great strides with virtually no capital expenditures."

How have management and employee attitudes changed?

A line worker said, "Well, we didn't communicate before. People feel better about their jobs. People are more excited about their work. They understand how what they do affects quality and productivity." A group leader offered, "There have been tremendous improvements on the floor itself. We have positive changes because of kaizen." The quality control auditor stated, "People are listening to each other now. Workers are now interested in quality and productivity." Another group leader added, "Management is more interested in listening and considering ideas of employees. Employees are trying harder not to make mistakes. They like to see good numbers (results) on the board." An engineer suggested, "Employees see their direct link to productivity and profit."

What has been learned from this experience?

"We really are the experts."
"We didn't have a good problem solving process before the blitz."
"We used common sense."
"We can make changes ourselves."
"Bottom up works."
"Trying new ideas is good."
"Kaizen blitz got the job done where other approaches have not."
"The support of the operations manager and supervisors made this possible."
"My ideas can make a difference."
"We can follow through with improvement and change."

Discussion

A case study of one firm may not predict future success with other, different organizations. However, careful case study documentation can assist and guide future kaizen blitz users to success with improved quality, productivity, and employee satisfaction. Based upon this experience, we believe several factors are essential for duplication of these results in other settings. The following items are not ordered by importance:

- *Management Support* - commitment from the top is a requisite for success, not only during the planning phase but also during the blitz and with follow-up. Explaining to those directly involved with the blitz how and why this is important should come from the top. Assuring employees involved and those left on the floor that this is important and necessary work is required. Allowing the blitz teams to stop production to experiment directly with change is required, but could be very divisive without management providing explanation. As follow up to the blitz there will be changes in process and procedure and monetary costs may be incurred.
- *Recognition and attitude about improvement* - both management and workers recognize and support the need to improve in specific, measurable areas.
- *Willingness to work as a team* - the concept of "team" is a requisite notion for a successful kaizen blitz. An unwillingness to ignore conflicts, past power struggles, and perceived inequities will prevent or impede progress.
- *Use of andragogy principles:*

1. short, focused time frame - a key element of the blitz process is a 3-5 day, no interruptions, intensely focused commitment to a specific problem. Participants see immediate, tangible results of their improvement efforts applied to a problem of interest to them.
2. participant experience - work experience is fully used to discover the causes of problems and improvements.
3. Skills as needed only - as noted in the methodology section of this case study, skills are needed for successful blitzes. However skills are only introduced when and if needed, not as separate training or because this is "good for you". This just-in-time approach keeps the team focused on results, not the educational process. New knowledge is applied immediately rather than taught for unspecified future use. Participants practice and improve skills while new information is fresh.

- *A measurable, manageable problem* - having a measurable, specific problem to work on is critical and essential to a successful blitz. Our experiences with these four blitzes and others outside this study confirm this requirement. "Improving communication between supervisors and line workers" is too vague. "Decreasing the amount of waste on line three" is measurable and specific.
- *An improvement attitude* - the heart of kaizen blitz is that *we* can make improvements and workers can be an integral part of the process that produces changes in productivity and quality. This attitude is fed by measurable successes that give positive feedback to workers.

Need for Further Study

While this case study provides an excellent example of successful use of the kaizen blitz process, there are cases where kaizen blitzes did not produce favorable results. Additional study is needed to determine why these blitzes were not successful. Some issues which may influence success include: amount of organizational support for the blitz process, need for visible results to create interest, and minimal essential methods of training and appropriate facilitation of blitz teams. These are but a few of the factors that should be studied to gain a more complete understanding of successful blitzes and the predictors of success.

Additional study is also suggested for other organizations that have been successful using the kaizen blitz process. The authors believe further study will help to develop a theoretical framework that explains successful and unsuccessful kaizen processes.

Implications for HRD Professionals

Several important implications emerge from this study for Human Resource Development professionals:

1. The kaizen blitz process can be a helpful tool to create immediate improvements for an organization. Improvements reported in this study were accomplished with little capital expenditure as well. The blitz can serve as an important start for long term continuous improvement by demonstrating positive results that inspire and encourage people.
2. Proper application of adult learning principles can be a highly effective way to obtain organizational improvements, encourage learning, and use the skills and experience of employees. Proper application of adult learning principles has been recommended for several decades by scholars and practitioners. Unfortunately, many organizations have not used appropriate adult learning practices when attempting organizational improvements. Successful use of adult learning in this case study supports what scholars and practitioners have long advocated relative to effective learning in organizations.
3. The results of this study indicate that a supportive context for successful improvement activities is necessary. Success occurs when adult learning is augmented with management support.
4. Many companies have tried and failed to achieve lasting success using traditional improvement approaches. The kaizen blitz process may be a way to rekindle interest and belief within these organizations that have tried but failed in the past. Use of kaizen blitzes can dispel cynicism and disbelief as well as restore confidence in the ability of workers to create meaningful organizational change. Confidence is restored by demonstration of successful, visible improvements in a short timeframe. For those organizations that have not attempted formal improvement activities, the kaizen blitz approach can set an example of success to be sought in the future. Organizations can then build upon these successes to achieve more permanent change and create a true culture of kaizen or continuous improvement.

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Organisation Identity: Exploring a "New" Avenue for Intervention and Performance Improvement

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Commentary in the business press has suggested that organisational success is related to the notion of corporate identity or organisation identity. The present study clarified the nature of the various concepts and established a theoretical framework for researching organisation identity. A correlational study was undertaken to determine the relevance of the organisational identity concept at an applied level. The results of structured interviews conducted with 153 executives representing 10 listed companies indicate strong relations between organisation identity, specific organisational attributes and organisational performance.

Keywords: Organisation Identity, Organisation Character

Organisations have become a taken for granted phenomenon in contemporary society. Indeed they have steadily grown and assumed centre stage in societal evolution and development, with many latter day global corporations financially more powerful than smaller nation states. Startling results produced by a Royal Dutch / Shell study of enduring organisations (De Geus, 1997) have however revealed that the life expectancy of organisations is rapidly declining (currently between 40 and 50 years). Organisational decline and bankruptcy were increasing at disturbing rates (Korten, 1995; Labich, 1994) with wave upon wave of costly mergers, acquisitions, corporate restructurings, and related organisational change events adversely impacting on the workforce, their dependants and ultimately society at large (Offerman & Gowing, 1990).

Various approaches and many attempts at accounting for the premature demise of organisations have proposed that environmental forces and economic and managerial reasons are to blame. The popularity of these arguments have waned over time, with many a scholar now arguing that they are over-simplistic, focus on symptoms and do not acknowledge the more fundamental psychological nature of organisational decline (for example Levinson, 1994). More recent contributions in the popular and business press (Labich, 1994) have suggested that the expensive path to corporate failure could be linked to the "*identity*" of the organisation (more specifically the absence thereof). This proposed relationship between identity and organisational performance is however not a novel concept, with some business leaders in the USA acknowledging this linkage (Wathen, 1986). Moreover, it has been indicated in some quarters (Chajet, 1989) that *corporate identity* is increasingly being viewed by US executives as a mainstream business activity. In the South African business context, for example, the results of a recent opinion poll among chief executive officers listed growth, *identity* and entering new markets as the top strategic priority for the period 1999 to 2003, followed by global competitiveness and productivity (Robertson, 1999). The conclusions of, among other, the Royal Dutch / Shell study of enduring organisations (De Geus, 1997), which emphasise a strong sense of identity as one of four key survival factors for organisations, further bolster the view that identity is an important element in organisational performance. These views are significant in the sense that *identity* (or *corporate* or *organisation identity*) as a concept is beginning to surface in non-advertising and non-marketing arenas as a possible "theory" which could account for business failure (or success).

The Problematic of Identity

The term *identity* is derived from the Latin word "idem" meaning "the same" (Abend, 1974) with its first known use dating back to approximately 1570 AD when it was used as an expression to convey the quality or condition of *being the same*, being *absolutely or essentially similar* and referring to a *sense of unity* (Van Tonder, 1987). Erik Erikson who is generally credited with popularising the concept as a consequence of his work in the field of individual psychology (Westin, 1983) described it as an *inner sense of sameness* and a *continuity of character* (Erikson, 1959). The term is however more frequently described in terms of the *uniqueness, solidarity, autonomy, continuity over time, and the discreteness of the person* (referred to as objective identity), which is differentiated from the person's *sense* of (having an) identity or subjective identity (Van Tonder, 1987). The notion of *identity*,

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however, is itself problematic. While Erikson (1959, p. 102) stressed "*...the term itself retains some ambiguity*", Albert and Whetten (1985, p. 265) argued that identity is a profound and consequential issue, but so difficult an issue that it is best avoided.

Turning to the notion of *identity within an organisational context*, it is not entirely unexpected to find Albert and Whetten (1985) commenting on the inherent ambiguity and abstract nature of the organisation identity concept, and the absence of an adequate theoretical framework to guide research and practice. This ambiguity is further exacerbated by the practice of using the concept interchangeably with concepts such as *corporate identity* and *corporate image*. The interchangeable and imprecise use of key concepts and terminology is in fact a common criticism of the field (Stewart, 1991; Van Heerden & Puth, 1995). Moreover, very little scholarly research has been conducted on the subject, with academics not devoting adequate attention to the subject of *corporate* identity (Stewart, 1991) and much of the available literature written at a fairly superficial level by consultants or executives of advertising agencies (Shee, 1988). Apart from the public relations and advertising perspectives, scant attention has been given to the notion of identity within an organisational context. Given this context, several fundamental research questions were formulated:

- Even though the concept of *corporate identity* has been popularised by the public relations and advertising disciplines, what essentially is *organisation identity*? Indeed, does it exist and can it be differentiated from *corporate identity* and *corporate image*?
- What would the role (purpose and function) of *organisation identity* be?
- Assuming *organisation identity* is measurable, will it differ from organisation to organisation, from industry to industry, or not at all?
- Can *organisation identity* be linked to organisational functioning, as Labich (1994) would have the reader believe?

Research which provides answers to some or all of these questions (and indeed the many more that could be phrased) should bring clarity to the prevailing confusion around the use of the various identity concepts and possibly provide alternative arguments to account for the less than desirable levels of organisational performance (and the premature demise of organisations).

The purpose of the study was consequently stated as to investigate and determine the theoretical and practical relevance of the *organisation identity* concept. Several more specific research objectives were stated, which focused on exploring and defining organisation identity from a theoretical perspective - in relation to similar concepts in use (corporate identity, corporate image). During the empirical phase the study would primarily explore the existence and relatedness of organisation identity as construct at an applied level.

Corporate Identity and Corporate Image

The prolific writing on the topic of *corporate identity* over the last decade or so is indicative of a growing awareness of the subject both in business quarters (Chajet, 1989; Wathen, 1986) and among behavioural science professionals (Gorb, 1992) and attests to the increasing theoretical and practical interest in the ideational dimensions of organisations (Alvesson, 1990). A substantial base of quasi-theoretical literature at a superficial level currently characterises the domain of *corporate identity* and *corporate image*. A great many viewpoints have been expressed and a vast array of definitions on these concepts have been published (Van Heerden & Puth, 1995). In the absence however of an adequate theory base and a lack of systematic research (Stewart, 1991), the conceptual boundaries of the concepts have become diffused and contributed to confusion and the practice of using the concepts interchangeably. While it is generally acknowledged that *corporate image* and *corporate identity* are associated (Ind, 1992; Stewart, 1991; Van Heerden & Puth, 1995) this relationship in itself appears to be a source of confusion. It is for example not uncommon to encounter views expressing either similarities between corporate identity and corporate image (Zinkhan, 1993), or indicating that the two concepts are *closely bound* together (Stewart, 1991). The conceptual proximity of the two concepts appears to have contributed to a reciprocal "spill over" of meaning from one concept into the domain of the other - to the extent that both concepts have adopted features of the other.

A source of complexity compounding the existing difficulties experienced with the terminology, is the existence of distinct schools of thought within the *corporate identity* literature (Balmer, 1995). The most established and prominent of these streams hails from the corporate communications and public relations field, and emphasises the visual and design components of the organisation as the essence of *corporate identity*. This perspective is represented by those that view *corporate identity* as the visual manifestation and projection of a desired identity, notably through means such as the company's name, its logo, corporate colours, tagline, slogans, and symbols (for example Schmitt, 1995; Schmitt & Pan, 1994). The emphasis placed on the visual components of the organisation as a means to *influence or manipulate (control and manage) the perceptions*, which the public and other stakeholders develop in respect of the organisation, is a salient feature of this approach.

Less prominent, but gaining ground is the school of thought that relates *corporate identity* to the company's mission, philosophy, and culture – essentially arguing that *corporate identity* depicts the innate and distinct personality or character of the organisation (for example Ackerman, 1984; Balmer, 1995). Proponents of this view argue that the typical visual attributes of the organisation are (or should be) the manifestations of the underlying distinctive character of the organisation, and imply alignment or congruency between organisation character and appearance. This approach appears to be more closely aligned with the traditional, psychological concept of *identity*. Indeed, there is a growing recognition that *corporate identity* can be related to the fundamental and psychological concept of *identity* (Ackerman, 1984). In this context, corporate identity is idealised as the distinctive qualities or personality of the organisation, which reside within and drive the organisation. The professional and business publications are flushed with references to *identity crises* and variations such as "*mistaken identity*", "*searching* for a new identity", a "*split* identity", etc., which tend to reinforce a more psychological view of corporate identity. These conceptualisations however lack the psychological depth and sophistication generally observed in terms of the psychological concept of personal or individual identity. In practice *corporate identity* has not yet evolved to the point of incorporating the psychological fundamentals of the core or generic *identity* concept.

The reality that the *identity* of the organisation is more than the traditional concept of *corporate identity* (with its emphasis on visual cues) has been acknowledged. In this regard Olins (1990, p. 22) has stressed that the "visual promise" of *corporate identity* must be underpinned by an improvement in the communications or behaviour of the organisation. Furthermore, a new logo or brand will not secure a new *identity* if these organisational symbols do not adequately reflect internal organisational reality (Olins, 1996). Reflecting on the status of the *corporate identity* field, it must be concurred with Glover (1993, p. 38) that too much emphasis has been placed on the world outside the organisation and not enough on the world inside it.

While corporate identity appears to be concerned more with the purposeful projection or portrayal of the organisation – predominantly through planned and persuasive visual means, *corporate image* tends to be the result or effect of, among other, the efforts to project a desirable corporate identity. Descriptions of what a *corporate image* is, range from the relatively uncomplicated *picture that a company's audiences have of it* (Ind, 1992), to the more encompassing *set of beliefs, experiences, feelings, knowledge, attitudes and perceptions stakeholders have of the organisation* (Van Heerden & Puth, 1995). Generally though, *corporate image* conceptualisations tend to vary around the common core of a *perception of the company* (Van Tonder, 1999). Shee's (1988) observation that the majority of *corporate image* conceptualisations tend to view the concept as a manufactured rather than a true reflection of the organisation remains valid. The *corporate image* is essentially viewed as a marketing asset, a market-positioning device, and as part of the strategic agenda to be managed and designed for competitive advantage (Dowling, 1993; Stewart, 1991).

Of particular importance, is the claimed impact on the organisation's performance, of firstly, *corporate identity*, and secondly *corporate image*, which enjoys popular support. Authors such as Ackerman (1984) argue that corporate identity clearly and consistently sheds light on business success and failure. Several authors have more specifically stated that an inaccurate or inadequate corporate identity and perceptions of this identity (introducing the corporate image concept) will negatively impact on the company's sales and earnings, employee morale, ability to attract talented people and expansion capital, and general performance on Wall Street (Chajet, 1989). While many of these arguments appear to have some face validity, sound empirical studies are rare and more research is required before this relationship can be substantiated. As with corporate identity, claims as to the impact of corporate image on organisational performance abound (see for example Treadwell & Harrison, 1994, who cite numerous studies in this regard). Despite this observation, substantive empirical research in this domain is also lacking (Shee, 1988; Stewart, 1991; Treadwell & Harrison, 1994).

Organisation Identity

In stark contrast to the proliferation of quasi-theoretical contributions in the field of corporate identity, the literature reveals a marked absence of contributions on the subject of *organisation identity*. Although each of the rather limited number of theoretical contributions made in respect of *organisation identity* practically represents a different perspective, four major streams or paradigms can be identified.

The *psychoanalytic* approach, which is evidenced in the work of Diamond (1993) and Czander (1993), applies concepts from the domain of individual psychoanalytic theory to organizations. Diamond (1993) for example describes organisation identity as the unconscious foundation of organisation culture and suggests that organisation identity be seen as an interpretative framework, from which the organisation can be analysed and the motivation and behaviour of its members be understood. As a theoretical perspective, it relies intimately on the psychoanalytic tradition and concepts – particular those relevant during childhood and later ego-development and for this reason the theory is difficult to apply to the organisation as unit of analysis.

The *social identity* approach, which is more concerned with the identity an employee or person derives from his/her membership of an organisation, is premised on the work of Tajfel (1974) and is represented more pertinently by the work of Ashforth and Mael (1989). Social identity theory argues that the individual seeks to obtain a positive social identity by virtue of membership to a group or groups (or organisations) that are held in high regard. It acknowledges the existence of either a group or an organisation with an identity sufficiently attractive or alluring for a potential member or stakeholder to seek belonging to it. It is argued that a distinctive organisation identity will attract potential employees, customers and shareholders to the organisation, and will enhance the support and loyalty of serving members. Both Diamond (1993) and Ashforth and Mael's (1989) articulation of *organisation identity* lean more towards the identity of the individual (as unit of analysis) and tend to understate the identity of the organisation-as-organisation (indeed may inadvertently diffuse the boundaries of the two identity concepts).

The *communication* approach to organisation identity (Hecht, 1993), essentially argues that organisation identity is a process of communication and self-expression, and messages about the self are exchanged during communication transactions. Identity is defined as a characteristic of the individual, stored as self-cognitions, feelings about self, and / or a spiritual sense of self or being. The character of the identity concept is clearly depicted through the basic assumptions of the theory, but the precise role and function of *identity* (its purpose) in terms of the overall functioning of the individual is less clear.

The fourth approach represents those researchers who focus on the identity of the organisation as an entity. The organisation identity concepts defined by these authors appear to incorporate one or more of the psychological parameters of the original identity concept as articulated by Erikson (1959, 1968). This school of thought is represented by the work of Albert and Whetten (1985), Dutton and Dukerich (1991), Dutton, Dukerich and Harquail (1994), and Van Tonder (1987) and can be referred to as the *classical* approach to organisation identity. Common to these authors, is the equation of organisation identity to the *distinctive character* of the organisation, which is evidenced in those features of the organisation that are considered *core, distinctive, and enduring*. In keeping with Erikson's (1959, 1968) views of *individual identity*, *organisation identity* is considered a life cycle bound phenomenon, which may become more salient during different development stages – particularly during change (for example transitions from one life cycle stage to another).

Of the listed approaches, it is only the research by Albert and Whetten (1985) and Dutton and Dukerich (1991) that attempted to extend the theory to some form of empirical exploration (qualitative, case study approaches). A brief comparison of the various contributions within the identified approaches indicate that the term *organisation identity* in most instances, is a misnomer - frequently employed to indicate the identity of the *individual* employee. As such, it does not depict the organisation as unit of analysis, whose identity could more appropriately be referred to as organisation identity. A substantial degree of consistency is however observed within the classical approach in terms of the frequency with which the organisation's identity is equated to its character or personality (used as synonyms) and, specifically, the distinctive / unique, central and enduring nature of the organisation. Secondly, while using different terminology such as frame of reference, schema, or cognitive gestalt, the theoretical contributions seem to suggest directly and indirectly that organisation identity is an integration mechanism or framework. Organisation identity itself is largely unconscious or hidden and only becomes salient when the organisation engages change (whether by choice or otherwise), when it is challenged, or when it finds itself in transition between two life cycle stages. While Albert and Whetten (1985), and Van Tonder (1987) provide more evolved theoretical perspectives on *organisation* and *group identity*, adequately developed theories of *organisation identity* remain elusive. The problem is compounded by the alternate vantage points from which theorists approach the concept with or without regard for the psychological origins of the concept – a situation having its roots in the complexity and ambiguity of the psychological concept of identity and which subsequently prompted a restatement of the *organisation identity* concept by Van Tonder (1999).

Regardless of the perspective employed, it does appear as if most of the cited theorists would concur that identity has potentially serious ramifications and a significant impact which is often more indirect, pervasive and enduring than may be immediately apparent. The anticipated impact of organisation identity on the organisational system is yet to be determined empirically.

A wide array of organisational attributes is nominated by the respective theoretical contributors as being important components of the organisation's identity. Taken together, these include virtually all prominent features of the organisation, such as statements of ideology, mission, objectives, strategy, structure, organisational processes, shared values and beliefs, leadership, management philosophy, culture (frequently cited) and components of culture (such as rituals, ceremonies, stories, symbols), organisational boundaries, relationships (between employees, management and subordinates), logos, slogans, appearance of the corporate headquarters; organisational climate, the skills, abilities, attitudes and interests of the organisation; communication, feelings, social roles and social affiliations, and physical attributes of the organisation.

While *culture, structure* and to a lesser extent *leadership* and management, and *ideology/mission* are repeatedly mentioned, it appears that identity-defining attributes can be any attribute of an organisation. To an extent, this serves to confirm the absence of empirical research in the domain of organisation identity. It is assumed that empirical observation will bring more clarity to this situation by differentiating between more and less prominent variables (features) of an organisation's identity.

From the various, though limited, theoretical contributions in the field and drawing on Van Tonder's (1987; 1999) reconceptualisation of the *identity* construct, *organisation identity* was finally redefined as *a cognitive gestalt or integrative schema of the organisation's features which reflect its uniqueness or distinctive, central/core and enduring character*. It is established largely at an unconscious level and provides the basis from which the organisation is consistently perceived as unique (one of a kind) and is clearly differentiated from other organisations in its environment (also referred to as the fact of identity or objective identity). The organisation's identity (or lack thereof) *is experienced and expressed* at a subjective level in the form of *a sense of identity* (referred to as subjective identity). This subjective identity of an organisation is an emotional manifestation of the more cognitive and objective identity (as stated above), and essentially describes the organisation's *awareness* of its identity (or lack thereof).

The purpose of organisation identity was stated as to ensure that the organisation was perceived as a unique entity when compared to similar organisations. This it achieves through differentiating the organisation from its environment (through social comparison, introspection and self-categorisation), which in turn enhances focus and consequently facilitates adaptation, and the future survival of the organisation. Moreover, organisation identity which is established and maintained primarily at an unconscious level, is a life cycle linked phenomenon that is sensitive to change during periods when the organisation was particularly vulnerable and more at risk (start-up conditions, rapid growth and decline stages). Depending on the organisation's capabilities and environmental sensitivity, it could drift into a situation of identity diffusion or inadequate or inappropriate identity, which is referred to as an identity crisis. The latter if left unattended can seriously jeopardise the organisation's functioning in the short term, compromise intermediate adaptation to environmental change and ultimately result in the organisation's demise[1]. With this conceptualisation as context it was argued that *organisation identity* as the distinctive character or central, distinctive and enduring features of the organisation, could be differentiated on theoretical grounds from *corporate identity* (essentially the visual portrayal of the organisation's character) and *corporate image* (the perceptions stakeholders have of the organisation). At the same time it provides substantive grounds for exploring the meaning and relevance of the organisation identity concept at an applied level.

Empirical Exploration of the Organisation Identity Concept

Hypotheses developed on the basis of the literature review took the view that organisations do possess distinctive identities, which are related to specific organisational attributes or features. Moreover, that the *organisation's identity* is related to the organisation's performance.

The scant research base, devoid of any significant empirical studies and limited in terms of theoretical foundations, suggested exploratory research with a strong correlation component. An *ex post facto* field study with qualitative and quantitative data gathering methodologies was indicated to test the hypotheses of the study. Triangulation as methodology was pursued in the absence of a clear theory and empirical base, and both the independent variable (organisation identity) and the dependent variable (organisation performance) were operationally tested with several alternative definitions. *Organisation identity* was alternatively conceptualised as *the company's total answer to the question "who am I?"*; *distinctive character* or personality; *perceived uniqueness*; and, that combination of *organisational features which convey the unique, central or core, and enduring character* of the organisation. *Organisation performance* was defined operationally as performance *ratings* provided by executives (covering a seven year period); published *financial results* for the 1997/1998 financial year; and overall *rank order* position of the company based on the frequency with which it has been cited in "top performing" and "worst performing" tables of the Top 100 Companies (annual Business Times survey) for a four year period.

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[1] For a more comprehensive argument on the theoretical fundamentals of *organisation identity*, see Van Tonder (1999).

A cluster sampling strategy, drawing on companies resorting among the "Top 100" and worst performing companies on the Johannesburg Stock Exchange in the 1997 annual survey of Top 100 Companies (conducted by the Sunday Times Business Times) was employed. A list was drawn up and 221 qualifying companies were approached, of which the participation of 10 listed and high profile companies from 7 industry sectors[2] were secured. A structured interview (schedule) was used to obtain qualitative and quantitative data from the 153 top and senior executives who represented the participating companies. Qualitative data were obtained through structured, open-ended questions, the Twenty Statements Test (Rees & Nicholson, 1994) which is similar to an incomplete sentence procedure, and the use of respondent nominated metaphors to describe his/her company. Quantitative data was obtained through specific questions, which sought descriptions of the company in terms of various topics (e.g. uniqueness, culture, image, operational challenges, values), and required an assessment of company performance, focus, character and stage of development over a seven-year period. All quantitative questions employed rating scales.

Overview of key findings

Qualitative data were coded using a codebook approach and the frequencies so obtained were expressed as proportions of total responses by managers and companies. Cluster analyses revealed several distinct clusters of organisational characteristics. Companies differed from one another on these clusters with the best performing company (CO4, mining industry: coal) for example appearing more stable and low key than the worst performing company (CO3, mining industry: gold) which was more dynamic and risk orientated.

A series of clusters which described various identity *states/statuses* or *conditions* (the organisation's subjective experience and/or awareness of its identity) also emerged from the self-reported descriptive company statements. These *identity statuses* ranged from a strong *sense of unity* and solidarity, a sense of *identity search*, experienced *identity crises* (diffused identity), a sense of *enduring character*, a focus on and preoccupation with *corporate* or visual *identity*, a sense of *developing an identity*, to an experienced *identity loss*, and a sense of *possessing qualities relevant for establishing an appropriate identity*. Results revealed that organisations differed notably in terms of identity status with the top performing company (CO4) displaying a strong sense of unity/solidarity. The worst performing company (CO3) by contrast experienced a strong sense of identity crisis.

Quantitative descriptions of the companies were similarly subjected to data reducing methodologies. A principal components analysis[3] extracted 25, but ultimately only 21 usable factors (FM1 to FM25)[4]. Referred to as *identity factors*, these factors described various sources of uniqueness or distinctiveness, which ranged from an innovation-action culture anchored in, among other, unique leadership and management (referred to as an "innovaction" culture), to distinctive client-supplier relations and unique technology and systems. Notable differences in the profiles of participating companies were observed in terms of the identity factors.

Strong relationships between the organisation's *sense of identity* (identity clusters) and the more objective organisation identity (*identity factors*) were recorded. For this research population a company displaying for example a strong *sense of unity/solidarity or integrative character* is likely to exhibit a less prominent and reduced social role, a strong stakeholder care approach, a sense of order and unity, a prominent performance/success culture, a clear long term orientation, strong adaptive/change capabilities, a reduced emphasis on organisational size, the presence of a distinctive market orientation, a positive work climate, and the belief that it is unique in terms of its systems and technology. Companies rating high on sense of unity/solidarity were likely to define their distinctiveness in the industry in terms of their culture, client, systems, employees, and structure (smaller rather than larger). For these companies uniqueness was clearly not related (strong inverse correlations) to image, trading partners, role in the community, non human resources, or company name. The latter suggests that identity for them is not an *externally* acquired phenomenon, but is associated with *internal* (or core) attributes of the company.

A strong sense of unity/solidarity was also inversely related to the *performance* rank order[5] the company occupied (an organisation occupying a rank order position of 1, being the top performer, was likely to exhibit the greatest degree of integration or sense of unity). Results further revealed that a strong sense of unity/solidarity is associated with clear organisational focus and good performance[6] by the company during earlier years.

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[2] Financial/banking, retailing, mining (gold), mining (coal), food, manufacturing - leather, pharmaceutical and medical.

[3] The obtained factor matrix was rotated orthogonally (varimax rotation method) to maximise statistical independence of factors.

[4] Factor scores for the participating companies were calculated and used during subsequent analysis.

[5] Companies rank ordered on the basis of the frequency with which they appeared in top and worst performing categories (various financial performance measures) of the annual Business Times survey over a period of 4 years. The top performing company on all indices over the period, obtained a rank order of 1 (worst performing company in the research population was allocated a rank order of 10).

A company presenting with an *identity crisis* in many respects exhibit characteristics opposite to that of a company with a strong sense of unity, and is likely to occupy a lower rank order position in terms of performance over time. A company in this category will be characterised by the absence of a sense of organisational uniqueness, the absence of an innovation-action culture, the absence of a performance/success culture, inadequate client/supplier relations and a strong preoccupation with public prominence, organisational size, and its image and visibility. At the same time it will display a strong risk orientation, but less of a distinctive market orientation when compared with companies not experiencing a diffused identity or identity crisis. Of particular interest also, is the observation that experienced identity deficiencies were associated with deficient organisational focus during previous years. The sources of distinctiveness associated with (nominated by) companies experiencing identity crises include societal role, image, physical facilities, organisational size and clients. Sources of organisational distinctiveness for companies in a state of identity crisis clearly *exclude* (high inverse correlations with) leadership, performance and management. In general, organisations with strong identities in this specific population were more likely to be small and agile whereas larger organisations tended to grapple to a greater extent with identity deficiencies.

Where identity was defined as *distinctive and clear character*, organisational character ratings for several years correlated highly with organisational stage of development, focus and performance - as rated by executives. Clarity of character in 1995/6 in particular, was strongly associated with organisational performance for the years 1994/5 to 1997 – more so than character ratings obtained for any other year. This finding however should be interpreted in terms of socio-political and economic conditions prevalent at the time. The enduring significance of organisation character (identity) is illustrated with these results and while causality cannot be established with this study, results provide firm grounds for the hypothesis that the identity status of an organisation will have an enduring influence (positively or negatively) in, and on the organisation. In practice this may imply that the influence of the organisation's current identity (character) status will prevail for a period of 2 to 3 years or longer.

The relationship between character, stage of development, focus and organisation performance for this diverse population provide grounds also for the hypothesis that an organisation should have a clear character when it enters a growth stage and probably should not attempt major acquisitions or mergers if its identity is diffused, *and* it wishes to maintain acceptable performance levels. It is argued that clear and distinctive character enhances focus and consequently impacts positively on performance.

Short term financial indicators for the 1997/1998 financial year revealed similar strong, positive relationships with past identity/character assessments. A company that exhibited a clear and distinctive character during 1996 and 1997 was, for example, likely to report higher net profits, return on assets (ROA) and return on equity (ROE) than a company with a diffused character. Similar, though somewhat weaker trends were observed for organisations with a strong *sense of identity*.

Conclusions

In general, organisation identity was consistently observed regardless of how it was operationally defined (whether holistic self-descriptions, specific identity descriptions, or more structured, quantitative descriptions), with organisations demonstrating distinct identities (in various stages of experienced adequacy or clarity) on a consistent basis. Results also revealed that organisation identity for this research population, correlated consistently (and strongly) with specific sets of organisational features. More importantly, organisation identity consistently and in practically meaningful ways related to organisation performance. It was noted, in addition, that organisation identity (distinctive character) correlated equally high with organisational focus and stage of organisational life cycle, and ultimately organisational performance. The identity-performance relationship has indicated that organisation identity is a life cycle bound phenomenon and highlighted the pervasive influence of organisational size. It was consequently concluded that the implicit null hypothesis for each of the stated hypotheses could not be entertained, and that key research questions can be answered affirmatively.

The empirical findings of the study were consistent with many of the theoretical assumptions regarding the nature of identity. Results furthermore suggest that processes of identity acquisition and the concept of identity crisis may be rewarding avenues for continued research. Conclusions, though constrained by the non-probability (convenience) nature of the research sample, nonetheless confirmed the relevance of organisation identity to organisational functioning and its linkage (and sensitivity) to changes in the organisational life cycle. The strong and pervasive relationship of organisation identity with organisational performance indexes has important implications for an understanding of organisations, their management and survival, and generally the role of leadership. It introduces a hitherto unknown concept into the performance management domain, which, on reflection, suggests that many established managerial routines and practices may need to be reconsidered from an organisation identity perspective. For this research population, it is suggesting that management may comfortably direct managerial focus, energy, and other resources towards identity establishment, maintenance, and/or "management" with solid prospects for enhancing organisational performance – regardless of whether this relates to short or medium term results.

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[6] Mean company performance for each year as rated by executives.

The findings, secondly, suggest that practitioners, consultants, and scholars in the field of human resource management and human resource development in particular, acknowledge that organisation identity (or distinctive character) needs to be factored into discussions when contemplating organisation and performance improvement. For this research population, organisational success was more likely when the organisation had a clear sense of unity and an enduring, distinctive character - of who and what they are. The converse is equally valid. Where identity or character was uncertain (diffused) organisational focus and performance were also adrift. For the practitioner, the reported results suggest that at best, organisation identity or character be measured and monitored, but at worst may imply concerted effort towards the establishment and maintenance of a clear and distinctive identity. Several entry points for diagnostic purposes are indicated. In this regard the organisation's sense of identity (whether clear or diffused), organisational focus (whether clear and targeted or unclear/inappropriate or adrift) and stage of development (for example entering, or emerging from, growth, consolidation or decline stages – indeed, any major change event) may provide avenues through which the organisational performance-focus-identity relationship can be explored. This is furthermore attainable through both qualitative and quantitative measures, such as those employed in this study.

Finally, while the exploratory nature of the current study precludes inferences about causality, strong foundations for hypotheses in this direction has been established. Confirmatory research may well entrench an alternative approach to improving and sustaining organisation performance, and extending the life expectancy of organisations to the benefit not only of the workforce and those affected by organisations, but also society at large.

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Identification of Critical Work Environment Variables for Quality Performance in a Service Organization

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The purpose of this study was to identify the critical work environment variables for quality performance in an organization. The theoretical framework of the study was based on total quality management and sociotechnical systems theories. This exploratory study concluded that the following organizational variables are the most important when it comes to quality improvement in a marketing services organization: satisfaction with internal processes; commitment of peers towards quality; having easy accessibility to others in the organization; few bureaucratic barriers to get the job done; effective communication channels within and between work teams; and achievement of ISO 9001.

Keywords: Quality, Socio-technical, Performance

The ultimate goal of all HRD interventions is to improve organizational performance. To a CEO, bottom-line organizational performance translates into improvements in productivity, quality, and cost reduction which in turn result in increased profitability and competitiveness. As the title of this paper implies, the focus of this study is the identification of critical variables for quality performance.

Successful organizations seek to proactively and systematically understand and respond to current and future, external and internal customer needs. Meeting and exceeding customer expectations is an area that has long been neglected by U.S. businesses. "The ultimate competitive advantage is established when an organization develops a culture that supports its internal customers" (Lindsay & Petrick, 1997; p. 7).

Despite high expectations, implementation of total quality management (TQM) interventions has produced mixed results (DeSimone & Harris, 1998; Whitney & Pavett, 1998). In particular, "the practitioner literature suggests that there is a high rate of success with TQM, particularly from the organization's perspective. Many companies reported that TQM has led to significant improvements in product quality and service leading to increased market share, profits, and company image" (DeSimone & Harris, 1998; p. 459).

Researchers, however, have also provided a contrasting view with regard to the effectiveness of TQM interventions. According to Spector and Beer (1994), "the TQM picture is far from rosy. There is a whole other set of data with which to contend, data to suggest that the 'failure rate' for TQM interventions -- that is, TQM efforts which failed to live up to the expectations of their champions within the organization - is upwards of 75 per cent, and that gloomy assessment remains relatively constant whether looking at organizations in the USA or the European Economic Community" (p. 63).

A limitation of TQM research is that its results are almost all based on case reports which in turn are generated by practitioners rather than researchers who follow sound research designs (Hackman & Wageman, 1995). Macy and Izumi (1993) in their organizational change, design, and work innovation meta-analysis study of 131 North American field studies described TQM research designs as "extremely poor" with severe empirical research data limitations.

Aside from the research design limitations, TQM research is also negatively impacted by the lack of uniform and consistent definition of quality (Reeves & Bednar, 1994). Reeves and Bednar argue that "continued inquiry and research about quality and quality related issues must be built upon a thorough understanding of differing definitions of the construct. Universalistic propositions describing the relationship among various variables and quality cannot be made when the meaning of the dependent variable continually changes" (p. 419).

According to Whitney and Pavett (1998), the academic literature has not yet devoted much attention to the study of quality management implementation. Hence, there are few studies and research-based tools available to facilitate total quality management (TQM) diagnosis and implementation. Because of this lack of research, the authors stress, that there is a gap in knowledge of how organizations function.

Aside from TQM, the sociotechnical systems (STS) approach has also been widely used in order to enhance organizational performance. However, the STS intervention as a stand alone approach has received scrutiny as well. More specifically, Persico and McLean (1994) in their comparison of the STS and TQM paradigms have concluded that

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"STS is ambiguous, theoretical, and may over-emphasize the social side of the organizational system, whereas TQM/CQI may be overly prescriptive and pragmatic and may over-emphasize the technical side of the system" (p. 11). Given the weaknesses of both paradigms, Persico and McLean (1994) suggest that the theories of TQM and STS are "in the process of being merged and combined with other approaches to enhance the transformation of industry" (p.11).

With regard to the merger of STS and TQM theories, Manz and Stewart (1997) point out that limited effort has been devoted to the potential synergies that could be obtained from combining TQM and STS approaches. Manz and Stewart (1997) also stress the point that TQM and STS, widely recognized and implemented work system approaches, show inevitable weaknesses as stand-alone methods. The authors propose that by effectively integrating and synergizing the strengths of TQM with the strengths of STS the potential exists for creating work system designs that merit the large short-term and long-term investments required for work system redesign. Comparative strengths of the two approaches are described as follows: TQM provides a standardized system for measuring and tracking performance, STS provides a flexible structure that encourages adaptation to a changing environment; TQM focuses on coordination of multiple work processes, STS focuses on innovation through diversity of inputs. In short, the authors suggest, that "through better understanding and synergistic integration of TQM and STS, the benefits of simultaneous stability and flexibility, as well as innovation, psychological ownership, quality of worklife, continuous and discontinuous learning, and ultimately high organizational performance and customer satisfaction may be realized" (Manz & Stewart, 1997; p. 68).

The sentiments expressed by Manz and Stewart (1997) are echoed by Lindsay and Petrick (1997) as well. In particular, Lindsay and Petrick (1997) advocate that "the philosophies of the parallel movements of OD and total quality are now rapidly coming together as total quality advocates try to deal with the human factors in quality improvement and OD people attempt to deal with the technical and measurement factors that accompany the challenges of 'planned' organizational change" (p. 4).

Problem Statement

Given the limitations of TQM research and the current direction toward merging TQM and STS theories, the main purpose of this empirical study was to to identify, prioritize, and describe the most important STS and TQM work environment variables for quality performance in a marketing services organization. This study also addressed the limitation with regard to the lack of uniform and consistent definition of the construct of quality, by operationalizing the quality construct in terms of distinct and universal measures that could be applicable in a variety of settings.

For this study, the work environment was defined in terms of the following TQM and sociotechnical systems (STS) dimensions: (1) awareness of quality strategy; (2) continuous improvement emphasis; (3) commitment to quality; (4) quality policy alignment; (5) communication/information sharing; (6) customer satisfaction sensitivity; (7) process measurement; (8) peer team support; (9) quality culture perceptions; (10) availability of resources necessary for task performance; and (11) ISO 9001 compliance.

Quality performance was operationalized in terms of the following quality indicators: (1) satisfaction with quality of work output - the extent to which employees are satisfied with the quality of work output they receive from their fellow workers; (2) external customer satisfaction - the extent to which external customers are satisfied with the organization's services; (3) satisfaction with internal processes - the extent to which employees are satisfied with internal processes of the organization; (4) timeliness - the extent to which a service will be performed when promised; (5) accessibility and convenience - the extent to which employees have easy accessibility to others they need to perform their job; and (6) responsiveness - the extent to which employees react quickly and resolve unexpected problems.

In short, the main research question this study attempted to address was: What is the degree of association between the identified work environment variables and quality indicators?

Theoretical Framework

The theoretical framework of the study was based on total quality management and sociotechnical systems theories.

Total Quality Management

Proponents of total quality management maintain that there is a universal set of practices that if implemented will lead to high performance and organization development. Total Quality Forum recently defined total quality (TQ) as

> a people-focused management system that aims at continual increase in customer satisfaction at continually lower cost. TQ is a total system approach (not a separate area or program), and an integral part of high-level strategy. It works horizontally across functions and departments, involving all employees, top to bottom, and extends backwards and forwards to include the supply chain and the customer chain. The principles and practices associated with total quality impact all the traditional OD approaches. (Lindsay & Petrick, 1997; p.20)

According to Whitney and Pavett (1998), TQM implementation is a major organizational change effort that requires "a transformation in the organization's culture, processes, strategic priorities, and individual attitudes, beliefs, and behavior" (p. 9). This type of change is so comprehensive, that successful implementation requires a total organizational paradigm shift (Whitney & Pavett, 1998). In all, the TQM approach embodies principles, ideas and tools from a variety of disciplines, including psychology, sociology, statistics, management, and marketing (Dervitsiotis, 1998).

The main objective of TQM interventions is to develop organizations which create value through greater satisfaction of all relevant stakeholders. "Through well structured processes, TQM aims to create an environment that encourages people to grow as individuals and learn to bring about both small but continuous (kaizen) and drastic or breakthrough improvements" (Dervitsiotis, 1998; p. 112). To be successful, TQM interventions must (a) have the commitment of management at all levels of the organization; (b) focus on the needs of both the internal and external customers; (c) insist on everyone's participation; (d) make decisions based on facts; and, (e) aim for continuous improvement (Dervitsiotis, 1998).

Sociotechnical Systems Theory

For many years now, organizations have used sociotechnical systems designs in order to improve organizational effectiveness. According to Pasmore (1988),

> the sociotechnical systems perspective considers every organization to be made up of people (the social system) using tools, techniques and knowledge (the technical system) to produce goods or services valued by customers (who are part of the organization's external environment). How well the social and technical systems are designed with respect to one another and with respect to the demands of the external environment determines to a large extent how effective the organization will be. (p. 1)

In general, STS interventions focus on a combination of organizational structural demands, such as workflow, task accomplishment, and performance, social demands, such as relationships among workers, and external environment demands, such as meeting external customer expectations (DeSimone & Harris, 1998; Cummings & Worley, 1997; Pasmore, 1988). "STS interventions include quality circles, total quality management, and self-directed work teams" (DeSimone & Harris, 1998; p. 455).

Research has shown STS interventions are among the most widely used and effective OD interventions (DeSimone & Harris, 1998). A review of 134 STS studies by Pasmore, Francis, Haldeman, and Shani (1982) indicated that overall, 97% of the reviewed STS interventions resulted in quality control improvement. Another important meta-analysis study that contributed to the quest of determining the effectiveness of STS interventions, is the one conducted by Macy and Izumi (1993). In their seven-year long meta-analysis study, the authors considered 1800 field studies that took place between the years of 1961 and 1991. Out of 1800 only 131 field studies met the strict research criteria required for a quantitative meta-analysis utilizing individual study d-effects.

The purpose of the Macy and Izumi (1993) study was to provide information with regard to the success and failure of various organizational structure, human resource, technology, and TQM features or action-levers. According to the authors, "little empirical work is available to examine organizational transformations or systemwide change and its ability to improve performance" (p. 236). Furthermore the authors stressed that "the need for a standardized methodology assessing performance outcomes and their relationships with certain action-levers or design features across organizations in organizational development has become pronounced" (Macy & Izumi, 1993; p. 237). Since the authors did not find any empirical TQM field studies that met their research design and data requirements, they reported results on the structural, human resource, and technological design features only. In all, the authors identified 17 structural, 14 human resources, and 14 technological action-levers that were common among the field studies under consideration.

The findings of this meta-analysis study suggested that organizational design and change interventions are very effective in improving organizational performance. The meta-analysis showed that the strongest organizational improvements are made in the financial area in which costs go down and product quality as well as productivity improve. The results of this extensive meta-analysis study also showed that human resource interventions alone do not result in large organizational improvements and can be more effective when introduced holistically, accompanied always by structural changes. Macy and Izumi (1993), further concluded that the design combination of technological, human resources, and structural change produced the highest and strongest organizational improvement. The latter conclusion not only exemplifies the importance of STS interventions, but perhaps it also explains why they have been found to be so effective when it comes to enhancing organizational performance.

Research Questions

As stated earlier, the main purpose of this empirical study was to identify, prioritize, and describe the most important TQM and STS work environment variables for quality performance in a marketing services organization. In short, this study attempted to answer the following research questions:

1. What is the degree of association between the identified work environment variables and quality indicators?
2. To what extent is satisfaction with internal processes associated with external customer satisfaction?
3. To what extent is having all necessary skills and knowledge to perform job associated with quality performance?

Methodology

Subjects

The sampling frame of this study consisted of 295 professionals at a marketing services company in the Midwest. The staff membership was comprised of Sales, Account Services, Editorial, Graphics, Print Production, Training, Consumer Marketing, Network Services, Systems Development, Program Administration, and Administration/Finance professionals. Each member of the organization received a survey and was therefore identified as a participant.

Instrument

The instrument for this study consisted of a 43-item questionnaire. The questionnaire was custom designed to assess the overall quality performance environment of the organization and was partly based on Lindsay's and Petrick's (1997) quality and sustainable productivity assessment instrument. The instrument also incorporated in its design three training transfer related variables in order to assess the degree to which supervisory support for training exists in the organization. The questionnaire further prompted the respondents to indicate the degree to which they had all necessary skills and knowledge to perform their job. Overall, the *reliability* of the instrument was measured in terms of coefficient alpha and was found to be 0.95.

Method

The procedure involved distribution of a questionnaire to be filled out by each employee and returned. A cover letter from the Executive Vice President of the organization accompanied the questionnaire and the respondents were assured of complete anonymity. A monetary incentive of one hundred dollars was applied to encourage participation and maximize the response rate. A series of three reminder/follow up e-mail notices were forwarded to participants. A second distribution of the survey and cover letter was issued two weeks following the original dissemination of the survey. The *response rate* for this study was calculated at 86.4% (255/295).

Data Analysis

After the data from the 255 participants was collected, both descriptive and inferential statistics were used to analyze it. In terms of research question 1, correlational and multiple regression analyses indicated the degree of association between the identified work environment variables and quality indicators. Correlational and regression analyses also assisted in answering research questions 2 and 3. In particular, through correlational and multiple regression analyses the researchers were able to describe the association between satisfaction with internal process and external customer satisfaction as well as between the variable of having all necessary skills and knowledge to perform job and the quality indicators.

Results and Findings

Table 1 depicts the regression model that corresponds to each quality indicator. Aside from the adjusted R square values, Table 1 also depicts the pertaining Pearson correlations. Table 2 lists the correlations that relate to research question #3.

As shown in Table 1, the regression model pertaining to *external customer satisfaction* revealed that satisfaction with internal processes in the organization, availability of tools and equipment to perform the task, peer commitment towards quality, and enough time to perform the job in a professional manner were found to be the main predictors for external customer satisfaction. It is important to note that satisfaction with internal processes was by far the strongest predictor for external customer satisfaction. In other words, the more satisfied employees are with internal processes in the organization, the more likely it would be that the external customers will be satisfied with the organization's services.

According always to the data in Table 1, one can conclude that ISO 9001implementation is a very strong predictor of *satisfaction with internal processes* in the organization. Other variables that were found to be predictors of satisfaction with internal processes are: a) the extent to which the organizational structure makes it easy to improve processes; b) the extent to which key processes are regularly measured and audited; c) the extent to which inputs are received from others in a timely fashion, and d) the extent to which others produce quality output and are quick to respond to unexpected problems.

Satisfaction with quality of work output by peers was found to be mainly associated with a) commitment of peers toward quality; b) have enough time to perform job in a professional manner, c) peers hold each other accountable for work produced, and d) emphasis on quality by senior management. What these four variables indicate is that satisfaction of the quality of work output will be more likely to increase if the whole organization is committed and emphasizes the importance of quality, employees have enough time to perform their jobs in a professional manner and are accountable for the work produced.

As the data in Table 1 indicates, employees will be more likely to *receive inputs they need in a timely fashion* if they have easy accessibility to others, excellent relationships exist between work teams, and the organizational structure makes it easy to improve processes. Lastly, employees will be more likely to *quickly respond to unexpected problems* if, a) effective communication channels within and between work teams exist; b) they have easy accessibility to others in the organization; c)are encouraged to learn new skills and knowledge; and d) if people in the organization share the responsibility for the success or failure of work produced.

With regard to research question #3, according to the data depicted in Table 2, having all necessary skills and knowledge (skills/knowledge) to perform one's job has a low to moderate association with quality performance. As shown in Table 1, the skills/knowledge variable did not load into any of the regression models.

Conclusion

In summary, the data in Tables 1 and 2 tells us that external customer satisfaction is greatly dependent on satisfaction with internal processes. Satisfaction with internal processes was in turn found to be strongly associated with ISO 9001 achievement and an organizational structure that makes it easy to improve processes and requires that key processes are measured and audited regularly. Since the latter falls under the IS 9001 umbrella, it is safe to conclude that ISO 9001 is an effective mechanism that directly facilitates satisfaction with internal processes and indirectly, external customer satisfaction. Further, the data in Table 1 reveals that satisfaction of the quality of work output is greatly dependent on the commitment senior management and other employees in the organization exhibit toward quality. Moreover, the detailed analysis of the quality dimensions that pertained to inputs being received in a timely fashion and employees being responsive to unexpected problems indicated that quality improvement is greatly dependent on an organizational

Table 1. Regression Models and Correlations for Quality Indicators

External customer satisfaction	Satisfaction with internal processes	Satisfaction with quality of work output by peers	Inputs are received from others in a timely fashion	Quick employee response to problems
Satisfaction with internal processes adj = 23% r = 0.451**	ISO 9001 achievement adj = 37.7% r = 0.624**	Commitment of peers toward quality adj = 33.2% r = 0.579**	Have easy accessibility to others adj = 36.4% r = 0.559**	Effective communication channels within and between work teams adj = 25% r = 0.519**
Availability of tools and equipment to perform task adj = 6.9% r = 0.413**	Structure makes it easy to improve processes adj = 10.7% r = 0.582**	Have enough time to perform job adj = 8.5% r = 0.424**	Excellent relationships between work teams adj = 9.6% r = 0.534**	Have easy accessibility to others adj = 7.5% r = 0.474**
Commitment of peers toward quality adj = 2.8% r = 0.394**	Key processes are regularly measured and audited adj = 6.5% r = 0.569**	Accountability for work produced by peers adj = 3.9% r = 0.509**	Structure makes it easy to improve processes adj = 3.9% r = 0.531**	Encouragement to learn new skills & knowledge adj = 3.8% r = 0.433**
Have enough time to perform job adj = 1.4% r = 0. 367**	Inputs are received from others in a timely fashion adj = 2.9% r = 0. 511**	Emphasis on quality by senior management adj = 2.4% r = 0.517**	Satisfaction with internal processes adj = 1.4% r = 0.511**	Shared responsibility for success or failure of work produced adj = 2.0% r = 0.427**
Awareness of quality mission adj = .9% r = 0.379**	Satisfaction of quality of work output by peers adj = 1.2% r = 0. 477**	Coworker output is within the expected range adj = 1.9% r = 0.425**	Key processes are regularly measured and audited adj = 1.0% r = 0.276**	Satisfaction with internal processes adj = 1.3% r = 0.446**
Rewards for high quality output adj = 1% r = 0.264**	Quick employee response to problems adj = .6% r = 0.446**	Availability of tools and equipment to perform task adj = 1.2% r = 0.399**	Have enough time to perform job adj = 1.1% r = 0.440**	Supervisory advice on how to improve work adj = 1.0% r = 0.377**
		Availability of facts and information to perform job adj = .8% r = 0.460**	Emphasis on doing things right the first time adj = .9% r = 0.440**	Supervisory praise & recognition when applying new skills & knowledge adj = 1.3% r = 0.282*
		Encouragement of creativity adj = .9% r = 0.254**		Encouragement of creativity adj = .9% r = 0.433**
		High ethical standards adj = .8% r = 0.405**		
	Total	**Variance**	**Accounted**	**For:**
adj = 36% N = 246	adj = 59.6% N = 249	adj = 53.6% N = 265	adj = 54.3% N = 249	adj = 42.8% N = 246

**. Correlation is significant at the 0.01 level (2-tailed)

Table 2. Correlations of "Have all Necessary Skills & Knowledge to Perform my Job" with Quality Indicators

	External customer satisfaction	Satisfaction with internal processes	Satisfaction with quality of work output by peers	Inputs are received from others in a timely fashion	Quick employee response to problems
Have all necessary skills and knowledge to perform my job					
Pearson Correlation	0.273**	0.262**	0.288**	0.282**	0.305**
N	275	277	273	275	280

**. Correlation is significant at the 0.01 level (2-tailed)

structure that a) is characterized by few bureaucratic barriers; b) allows effective communication and excellent relationships within and between work teams; and c) provides all the necessary time, facts, information, tools, and equipment in order for employees to perform their tasks in a professional manner.

Given that the skills/knowledge variable did not load into any of the regression models, and it was found to exhibit low to-moderate correlations with the quality indicators, one may also conclude that having all necessary skills and knowledge to perform one's job is not as critical, when it comes to quality performance, as the identified TQM and STS variables. This conclusion is in agreement with the findings of the Macy and Izumi (1993) meta-analysis study, according to which, as stated earlier, human resource interventions alone do not result in large organizational improvements. Rather, human resource interventions can be more effective if they are introduced holistically, accompanied always with structural changes. As Macy and Izumi put it, "it becomes evident that the first action-lever implemented in transformation efforts must deal directly with power, control, and decision making issues. It would be necessary to be very naive to think that changing Human Resources systems by themselves will significantly change the financial performance of a firm. Top management has to be convinced that a flatter and leaner organizational structure combined with investment in Human Resources systems will improve performance" (p. 288). Having all the necessary skills and knowledge to perform one's job efficiently and effectively is obviously very important. But if these skills and knowledge are introduced in a system which is not designed for optimum performance, then it is doubtful that they will result in sizeable performance improvements.

Summary

Overall, the statistical analysis of this study identified the following organizational variables as critical components for quality performance in a marketing services organization:

- Satisfaction with internal processes
- ISO 9001 achievement
- Commitment of peers towards quality
- Easy accessibility to others
- Few bureaucratic barriers to get the job done
- Effective communication channels within and between work teams
- A structure that makes it easy to improve processes
- Availability of tools and equipment to perform tasks
- Having enough time to perform job in a professional manner
- Employees are quick to respond to unexpected problems
- Excellent relationships between work teams
- Key processes are regularly measured and audited

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How this Research Contributes to New Knowledge in HRD and Recommendations for Future Research

Through empirical analysis, this study was able to bridge some of the existing gaps in knowledge by identifying the most critical work environment variables that pertain to distinct quality performance indicators. Further, by relying on both, TQM and STS theories, this study has helped create a more holistic conceptual framework for studyingq uality improvement in a service organization and reinforced the link between the two theories. In terms of HRD practice, this study may assist HRD practitioners better assess organizational needs relative to quality performance and thus be able to implement more targeted changes. These more targeted changes in turn could signify the importance of the HRD function and demonstrate how HRD efforts can be linked to bottom-line organizational performance and the strategic mission of the organization in general. Finally, by replicating this study in other work settings researchers will be able to determine the extent to which the identified critical work environment variables are indeed crucial in other work settings or industries.

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Leadership Development: A Review of the Theory and Literature

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Leadership development, a component of Human Resource Development (HRD), is becoming an area of increasingly popular practice. It is estimated that billions of dollars per year are invested in some kind of leadership development in US companies. Yet a review of available theoretical and scholarly literature suggests that less may actually be known about this area of human development than is implied by popular practice. With an increasing emphasis on human development and expertise as a source of sustainable competitive advantage it is unlikely that the expenditure on and investment in leadership development will decline in the next few years. Growing expenditure on leadership development suggests an increasing effort to utilize leadership development as a vehicle for performance improvement. It is both timely and appropriate for HRD to become more critically involved in the study of the body of knowledge that supports and informs the practice of leadership development. This involvement will enable HRD to make explicit what really is and is not known about leadership development, and to consider the implications of such reflective study and findings for future research and practice.

Keywords: Leadership, Leadership Development, Leadership Education

There is a deficiency of real, scholarly knowledge about leadership development. Yet there is an increasing drive for and investment in leadership development in organizations (Boyett & Boyett, 1998; Clark & Clark, 1994; McCauley, Moxley, & Van Velsor, 1998). It would appear that the body of knowledge on leadership development has some distinct voids, some troublesome gaps, and that both may be well served by further purposeful and scholarly inquiry and study.

HRD is concerned with "the process of developing and/or unleashing human expertise for the purpose of improving performance" (University of Minnesota, 1994). As such, leadership development falls well within the general focus of concern of HRD. It is time for HRD to begin seriously studying not only the general phenomenon of leadership development, but also the link between leadership development and performance improvement. Both issues of leadership development offer HRD further leverage for strategic influence and action within organizations in the future (Ulrich, 1998; Torraco & Swanson, 1995).

Problem Statement and Theoretical Framework

For purposes of this study leadership will be taken to be a process whereby individuals influence groups of individuals to achieve shared goal or commonly desired outcomes (Northouse, 1997). Leadership development has been described as "as every form of growth or stage of development in the life-cycle that promotes, encourages, and assists the expansion of knowledge and expertise required to optimize one's leadership potential [and performance]" (Brungardt, 1996, p. 83). In a 1996 article in the Journal of Leadership Studies, Brungardt provided an excellent scholarly review of leadership development and leadership education research. In this review he focused on "what is known about how leaders are educated, developed and trained" (p. 82). A similar but more expansive work has been more recently published by McCauley, Moxley and Van Velsor (1998) resulting in a Handbook of Leadership Development.

Not withstanding these two pieces of work on leadership development the question of what is really known about developmental processes aimed at growing and developing leadership capabilities and expertise, and the link between leadership development and performance improvement, still remains largely unanswered and certainly warrants a lot more study and attention. This paper explores the following leadership development related questions:

What do we appear to know about leadership development?
What do we appear to not know about leadership development?

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What are the implications of the above "knowns" and "unknowns" for future research on and practice in leadership development?

Methodology

The methodology used was a conceptual analysis based on a review of related leadership and leadership development literature. Brungardt's (1996) article provided an important contribution in beginning to answer the above questions and played a fundamental role in the provocation of this study.

It is the purpose of this paper to present the current status of available theory and literature on leadership development. Through review, analysis and synthesis of related scholarly literature and theory a discussion of what is and is not known about leadership development is presented in four parts. The first part presents the current state of the available body of knowledge on leadership development. The second part highlights some of the core knowns in this body of knowledge. The third part presents some key "voids" or "unknowns" in the leadership development literature. And, finally, the fourth part offers some conclusions and possible implications of the insights gained from this paper for future HRD research.

Results

The Present State of the Body of Knowledge

Although there are innumerable authors on the topic of leadership, there are considerably less so on leadership development. Four notable authors who have endeavored to gather up the body of knowledge on leadership are Bass & Stogdill (1990), Gardner (1990), Clark & Clark (1994), and Northouse (1997). In Bass & Stogdill's 1182 page Handbook of Leadership, only one chapter (between 40-50 pages) is devoted to the topic of leadership development. In Gardner's book, two short chapters out of 17 touch on leadership development. And, in both Clark & Clark's work on Choosing to Lead, and Northouse's work on Leadership Theory and Practice, no insights are offered on leadership development itself. Instead these authors tend to focus on examples of leadership development programs (as an example of method) and in a few instances offer some insights on leadership learning and training.

The most noteworthy work on leadership development is a paper by Brungardt (1996) who appears to be the first to try to gather up some of this body of knowledge. He makes a good and noteworthy first stab at this rather complex and large task. Brungardts work is later followed by that of McCauley, Moxley and Van Velsor (1998) in their Handbook of Leadership Development. McCauley et al's work presents, however, more of a practitioner, how-to perspective on leadership development than a scholarly consideration of leadership development as a body of knowledge.

An initial literature search on the topic of leadership development revealed no papers of purely this topic, but rather 64 items concerning leadership development of two particular kinds, namely, of educational leadership and of military leadership. The literature on leadership development seems to be embedded in executive and management development, a tendency that is also reflected in the AHRD proceeding papers of the past four years.

A thorough review of the literature reveals that the body of knowledge pertaining to leadership development seems to reside in three key areas (Bass & Stogdill, 1990; Boyett & Boyett, 1998; Brungardt, 1996; Gardner, 1990; Jackson, 1993; Northouse, 1997; Schreisheim & Nieder, 1989; Yukl & van Fleet, 1992). The first of these three areas focuses on general approaches to leadership, and can be further divided into five categories, namely: (1) traits theory – emphasizing the personal attributes of leadership; (2) behavioral theory– emphasizing what leaders actually do and the identification of different styles and their effects on group performance; (3) situational theory– emphasizing the different demands different situations place on leadership and therefore leadership style; (4) power-influence theory– which explains leadership in terms of the amount, type and use of power and influence tactics; and (5) transformational theory– emphasizing the leader's role in the creation of culture and revitalization of organizations (Brungardt, 1996). Newer approaches, like the 3E's of Responsible leadership (White-Newman, 1993), Authentic Leadership (Terry, 1993), and Communal Leadership approaches (Bryson & Crosby, 1992; DePree, 1997) have provided frameworks for trying to integrate many leadership approaches – sometimes referred to as contingency approaches to leadership (Northouse, 1997; Terry, 1993; Yukl & van Fleet, 1992). Although these many approaches to and theories of leadership have provided us with different insights into the nature of leadership it is only recently that the question of how a leader is developed has become addressed by the literature, and somewhat poorly, it would seem, at that.

A second area in which the leadership development body of knowledge seems to reside is in that of leadership development research, most of which fall into four categories, namely, early childhood and adolescent development, the role of formal education, adult and on-the-job experiences, and specialized leadership education. (Bass, 1990; Brungardt, 1996; Clark & Clark, 1994; Hughes, Ginnet, & Curphy, 1993) The third area that contains some of the leadership development body of knowledge is that of leadership education research, which covers leadership development in elementary and secondary education contexts, leadership development in higher education, leadership development training programs, and leadership development among senior citizens. (Bass, 1990; Brungardt, 1996)

In commencing the task of attempting to assess the current state of the body of knowledge on leadership development one would expect to be overwhelmed by the volume of available literature. On the contrary the author was overwhelmed on two unexpected fronts. First by the lack of a specific body of knowledge of leadership development, and second, by the extent to which this literature seems deeply embedded, even hidden, within leadership and other social sciences (notably psychology) literature.

The literature review therefore points to a substantial lack of knowledge about the topic and a general lack of a co-ordinated, coherent body of knowledge on leadership development (Brungardt, 1996). Having briefly considered the general state of leadership development as a body of knowledge, the next consideration is what this body of knowledge informs us in terms of what we do and do not appear to know about leadership development.

The Core Knowns about Leadership Development

Through a synthesis of the literature the author identified eight core knowns about leadership development. 1) Leadership development occurs in early childhood and adolescent development. 2) Formal education plays a key role in leadership development. 3) On-the-job experiences are important for the development of leadership. 4) Leadership development also occurs through specialized leadership education. 5) Leadership education focuses on three specific areas. 6) There are a number of factors that can act as potential barriers to the effectiveness of leadership development. 7) Leadership development is a lifelong process. And, 8) Leadership development is often confused with management development. Each of these points is expanded upon in the paragraphs below.

1. Leadership Development occurs in Early Childhood and Adolescent Development Studies on early childhood and adolescent development seem to provide evidence that experiences from early in life impact on adult leadership potential. These studies vary in nature from how personal traits are substantially influenced by childhood and adolescent experiences (Gardner, 1990) and family influences (Cox, 1926; Jennings, 1943), how treatment of parents and parental standards influence the development of leaders (Bishop, 1951; Bass & Stogdill, 1990), how a family life that emphasized a strong work ethic and high education standards and responsibility is directly related to leadership potential and success (Bass, 1960; Day, 1980), to how opportunities in childhood and adolescence allowed young people to practice leadership activity (Bass, 1960; Murphy, 1947), and the influence of mentoring relationships at school become influential in leadership behavior (Clark & Clark, 1994).

2. Formal Education plays a Key Role in Leadership Development According to Bass (1990) many scholars believe that a liberal arts education is the best for preparing young leaders as it provides a broader educational experience considered essential to leadership (Clark & Clark, 1994; Gardener, 1990; McCauley, Moxley, & Van Velsor, 1998). Brungardt (1996) and Bass (1990) however caution that there is very little research that has been conducted to study the formal role education may play in leadership development. Studies conducted in the British education system provide some evidence to this effect, however this approach to leadership development is centered on a philosophy of classical, conservative education, where leadership is considered education for the elite and that the elite are the best suited to rule (Boyd, 1974; Burns, 1978; Lapping, 1985). Bass (1990) and Brungardt (1996) brought our attention to the fact that there is research available that shows that formal education does positively correlate with achievement of recognized leadership positions, however Brungardt prudently cautions that a positive correlation between education and leadership does not reflect nor support causation.

3. On-the-job Experiences are Important for the Development of Leadership. Many authors in the field have pointed to the importance of challenging job opportunities as a source for learning leadership skills as well as to learning from the people one works with and from the task one does as two valuable such sources for leadership development (Gardner, 1990; Hughes, Ginnet, & Curphy, 1993; Kouzes & Posner, 1990; McCauley, Moxley, & Van Velsor, 1998; Ulrich, Zenger, & Smallwood, 1999). In research work by McCall, Lombardo & Morrison (1988) researchers were able to identify the lessons learned from challenging assignments and experiences and link these back to leadership development. Other studies have found that learning from mistakes, developmental opportunities, job experiences and on-the-job mentors play an important role in leadership development (Copeman, 1971; Davies & Easterby-Smith, 1984; Lombardo, 1986).

4. Leadership Development also Occurs Through Specialized Leadership Education Evidence of the bearing of specialized leadership education programs and training have also been shown, through numerous research studies, to have a positive impact on leadership development. A meta-analyses, by Burke & Day (1986), of the effectiveness of these programs revealed a positive impact on leadership development, pointing to a conclusion that in most reported cases specially designed educational activities seem to enhance the development of leaders. Studies reviewing the effectiveness of short versus long term leadership training programs or activities have revealed that leadership development as a longer term process does seem to be more effective and deliver more lasting results than those of a shorter (few days to a week) duration (Guetzkow, Forehand, & James, 1962; Luttwak, 1976; McCauley, Moxley & Van Velsor, 1998). However, many of these last studies were conducted on management development training processes and may not be as applicable, if at all, to leadership development processes.

5. Leadership Training Focuses on Three Specific Areas. The purpose and content of leadership training appears to focus on three areas, namely, improving a leader's attitudes, skills and knowledge, training in success and effectiveness as a leader, and training and education on leadership styles (Bass, 1990). Studies on all three groups of training and education have revealed mixed findings and appear to rely heavily on participant self-reporting and perception reports of peers, subordinates and superiors (Brungardt & Crawford, 1996; Cromwell & Caci, 1997; Daugherty & Williams, 1997; Field, 1979; Hand & Slocum, 1970; Rohs & Langone, 1997). However, as pointed out by Bass (1990), the results of these studies cannot be guaranteed. Other specialized leadership education programs include those that focus on management development, the education of science and engineering supervisors, military leaders, executive development, entrepreneurial and achievement motivation, leadership of and by minorities, training leaders for foreign assignments, and training community leaders (Bass, 1990; Brungardt, 1996; Yukl & van Fleet, 1992; Clark & Clark, 1994; Morrison, 1994). Many studies conducted on the effectiveness of training of this nature have again revealed mixed results (Bass, 1990), but with some showing more positive evidence than others, for example, training leaders for foreign assignments (Chemers, Fiedler, Lekhyananda & Stolurow, 1966) and training community leaders (Rohs & Langone, 1997; Williams, 1981).

6. There are a Number of Factors that can Act as Potential Barriers to the Effectiveness of Leadership Development. What does appear to be of importance in determining whether leadership development and education are effective are numerous factors that affect the outcomes of these efforts (McCauley, Moxley, & Van Velsor, 1998). Bass (1990) highlight and discuss studies that substantiate the following as such factors of note:

The strengths and effects of the training depends on the criteria employed to assess these effects
The composition of the training group
The attributes of the trainer
The occurrence of follow-up, reinforcing practice and feedback, and
The congruence of training and the organizational environment.

7. Leadership Development is a Life-long Process. Leadership development is more a lifelong process than a series or collection of short-term developmental events and experiences; that, as pointed out by Brungardt (1996), leadership development includes the components of leadership education and training each of which are different to leadership development and involve a more narrow, specific focus, almost like interventions along the life-line of leadership development. Related research also reveals that research findings reveal mixed and often contradictory results (Latham, 1988; Rice, 1988) resulting in increasing debates over the empirical soundness of the field.

8. Leadership Development is Often Confused with Management Development. In many instances management and leadership are taken to be equivalent and interchangeable phenomena, with many early studies focusing more on skills, knowledge and attributes of management development and then been concluded for issues of leadership. Leadership studies and literature of the 1990's and today increasingly differentiate between these leadership and management as different and less related phenomena, calling into question the application of studies of one kind to the other (Gardner, 1990; Kotter, 1990; Kouzes & Posner, 1996; Yukl, 1989).

Voids in the Leadership Development Body of Knowledge

A number of compelling voids in this body of knowledge have been synthesized from the literature review. These voids must be studied and filled if this area is to mature in credibility of theory and practice. Four compelling such voids are discussed in the paragraphs below.

1. There is a Lack of Boundaries and Mapping of the Body of Knowledge of Leadership Development. One of these issues concerns the need to gather up studies and understanding of leadership development, and to conduct analyses of the evolution and nature of what is really known in this field. There is no clear and consistent answer to the question of what leadership development is and isn't. Although the works of Gardner (1990), Clark & Clark, 1994, McCauley, Moxley & Van Velsor (1998) and Brungardt (1996) make attempts at answering this question they are not yet adequate in this regard. Until the general aims, ideals and specific purpose of leadership development is consistently mapped out and bounded it is unlikely to mature into a credible field of thought and practice. Indeed the very question of whether leadership development is a field of thought and practice with its own body of knowledge is at stake.

2. There is No Clarity or Agreement on the Intended Outcome of Leadership Development. A review of related literature on leadership development leaves one with a serious question about what the outcomes of this field are intended to be. Is its dependent variable one of individual growth and development, or is it one of performance?. Indeed, what should it be? The literature highlights outcomes of leadership development as including the likes of improved subordinate and human relationships, improved attitudes, skills and knowledge, improved trainee leadership and group effectiveness, how to use major styles, improved decision-making style, sensitizing trainee's to their management role, and developing and sharing personal and organizational vision (from key studies highlighted in Bass, 1990; Clark & Clark, 1994; McCauley, Moxley & Van Velsor; 1998).

The link between leadership, and leadership development and performance, seems to lie more in belief than in justifiable evidence (Bass, 1990; Meindl & Ehrlich, 1987; Ulrich, Zenger, & Smallwood, 1999). Studies conducted by Meindl & Ehrlich put forward compelling evidence for how the belief that leadership contributes to specifically organizational performance produces a 'haloing' bias on related evaluative studies. Definitions of leadership and leadership development do not place performance as an explicit outcome of leadership. Some definitions may include statements of achieving results, but what those results are is left at best only partially clarified and are usually of the nature of essential characteristics, roles and responsibilities, attributes, principles and practices (Bass, 1990; Bennis & Nanus, 1985; Gardner, 1990). Nowhere is there a definition of leadership, and by association, leadership development, that includes 'for improving performance' as a core dependent variable of this field of study and practice. Rather, performance improvement is inferred, implied and assumed as an outcome of leadership and leadership development. Given the increasing investment in leadership development by not only American organizations, but by organizations worldwide, this is a particularly worrying void in the field. This lack of a real, justified link between leadership development and performance links back to clarity of assumptions that govern the thought and practice of leadership development. Until these assumptions are made explicit and the field defined in congruence with these assumptions and beliefs, little progress can be made in building sound knowledge in the field, let alone methods for proper research and inquiry (Ruona & Lynham, 1999). Unless these strides are made the field will likely continue to reflect an empirically inadequate and lacking framework for thought and practice.

3. Leadership Development Evaluation is Questionable. A third important issue concerning incompleteness in the field relates to the nature of evaluative studies and thus evaluative conclusions based on these studies. The literature review revealed that the majority of evaluative studies on the effectiveness of leadership development (including education and training) rely firstly on self-reports from the participants, and secondly on 360-type feedback instruments (Bass, 1990; Clark & Clark, 1994; Ulrich, Zenger, & Smallwood, 1999). Both these measures of evaluation are highly questionable in terms of. validity and reliability (McLean, 1995). 360-degree feedback systems are merely reporting on perceptions of behavior and attitude changes, yet they are sometimes masqueraded as valid and reliable measures of developmental effectiveness.

Largely missing from this field of study are directly observable behavior and attitude/style/performance changes and reports. Surprising, direct observation reporting has been used in research studies to determine what makes for leadership (Kouzes & Posner, 1989, for example, did a good job here). Yet, in studying the effectiveness of leadership development for these characteristics and practices direct observation and actual incident reporting on behavior and other changes is largely absent.

Furthermore, many of the evaluative research studies have been judged to be questionable due to poor design and control during the conduct of the research, calling into question the validity of the findings that have resulted from these studies (Bass, 1990).

4. There is a General Lack of Knowledge about the Unique Method and Content of Leadership Development Processes. A final area of concern in the field of leadership development links to the methodology and content of such activities and processes. Most of the research conducted in leadership development type studies are linked to specific models of leadership (for example, trait-theory, behavior-theory, situational-theory), yet leadership development encompasses many of these models and theories. This raises the question of whether research findings on the effectiveness of specific leadership theories will and do hold true when developed in combination with multiple and sometimes contradictory leadership theories. Can it be assumed that because some studies show a positive correlation between transformational leadership theories and group performance that the same positive correlation can be assumed when this theory/model is merely a component of a larger, more comprehensive leadership development process? Dubin (1976) cautioned against a tendency in the social sciences to fail to recognize the boundaries of theoretical models due to assumptions of commonality about human behavior and its universality. He said that this tendency causes us (in the social sciences) to assume that we can safely ignore the boundary conditions surrounding a given theoretical model, and described this tendency as an unfortunate intellectual habit of theorists and practitioners. He further suggested that the more we recognize that human actions may be different in different situations the more realistic we will be of the boundaries of theoretical models that we create. More work needs to be done on contingency theories that combine multiple approaches and perspectives on leadership and leadership development before such conclusions can be made.

Contributions to New Knowledge in HRD

Because HRD is concerned in part with the development and unleashing of human expertise for the purpose of performance improvement it should be concerned with the thought and practice of leadership development. To date most of this literature is embedded in the areas of psychology and management, lending this body of knowledge a predominant focus of either individual development or individual effectiveness, or a combination of both.

The HRD profession is struggling to find ways to partner more closely with business and to become more proactively involved in the strategic conversations of the organization (Torraco & Swanson, 1995). At the same time organizational expenditure on leadership development is on the increase with the apparently largely unsubstantiated belief and assumption that this development will lead, either directly or indirectly, to individual, group, and organizational performance improvement. It would appear that much inquiry and study is yet to be done in this area of human development. Because of HRD's expertise in human development and human development technologies, it would appear logical for the profession to take a more active interest and role in the conduct of leadership development related studies and research. And, by so doing an active contribution in the development of this body of knowledge could provide invaluable leverage for further strategic impact by HRD on organizational performance.

Conclusion

The majority of the research in the field of leadership development has focused on the what of leadership, rather than the how of leadership development, resulting in a lack of knowledge and empirical evidence regarding the subject of leadership development (Ulrich, Zenger, & Smallwood, 1999). Brungardt (1996) offers a compelling conclusive summary of leadership development and education, namely, that: (1) although leadership development and education are not new topics schoiarship in this area appears to be in its infancy, with literature in its early phases, and with both fields in the process of defining themselves and their research domains; and (2) that not only do leadership development activities lack documentation, but that there is a general lack of understanding of their impact, an understanding that may take years before being adequately supported by sound, and empirical research.

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Developing Workplace Leaders Through Their Emotional Reactions: Creating Committed Change Agents to Build a Learning Organization

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Changes to organizations are challenging leaders to change their mindsets on their roles and responsibilities. In traditional bureaucratic organizations that means looking for ways to create new structures and to build learning organizations. In such bureaucratic organizations, where will the leaders come from to create and to build? Are traditional leadership development programs, with their emphasis on the cognitive, able to produce these leaders and to change both mindsets and behaviors? This paper explores the concept and design of leadership development at an emotional level (learning through emotional reactions), describing a program of book readings, group discussions, and reflective writing. Wider implications for HRD are raised.

Keywords: Leadership Development, Learning Organizations, Emotion

The program described in this paper resulted from a period of personal reflection on my own experiences of leading, facilitating, and participating in leadership development activities. I had observed too many leaders attend, participate, and learn theories, models, and techniques, but rarely develop a commitment to change their behaviors. Those leaders had learned the need to changing their actions, but rarely moved beyond that cognitive appreciation. Something was missing from the programs; and my view was that passion could have a key role in bridging the gap between cognitive and behavioral change. As Ellinger, Watkins, and Bostrom (1999) pointed out, the curricula of management development programs designed to provide new knowledge and skills are often competency-based and focus on business functions and methods: those programs therefore need to be offered in different delivery formats. A leadership program was developed using such different formats to approach development at an emotional level - not to increase emotional intelligence (Goleman, 1998), but to approach learning through emotions. This paper provides an account of the program design and the pilot run evaluation.

Challenges facing leaders in organizations

Organizations are operating in a new dynamic environment caused by the increasing speed and turbulence of technological change, the influx of knowledge workers, and the move to a global and multicultural workplace (Bennis & Nanus, 1999). The concept of *learning organizations* has emerged in response to that changing operational environment. These are designed to involve everyone in identifying and solving problems; thus enabling the organization to continuously experiment, improve, and increase its capacity. In learning organizations, leaders emphasize employee empowerment and encourage collaboration across departments and with other organizations (Daft, 1999). That leads to a soft, intuitive model of organization with a horizontal structure, adaptive culture, linked strategy, personal networks, and empowered roles (Hurst, 1995). That links with the concept of *boundaryless organizations* which encourage free movement across vertical, horizontal, external, and geographical boundaries with the aim of increasing speed, flexibility, integration, and innovation (Ashkenas, Ulrich, Jich, & Herr, 1995).

The changes to a new dynamic environment with boundaryless and learning organizations have generated new challenges for organizational leaders. According to Hickman (1999), "this uncharted territory requires unparalleled innovative leadership that cannot be an extension or revision of the old model" (p. 3). The requirements for leadership in this new environment include (Allen et al., 1999): new systems thinking to design processes that increase inclusiveness and diversity in decision making; the design, support, and nurturing of flexible, durable organizations and groups, and systematic understanding needed to respond positively to change events; the

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understanding or intuiting of many interrelated systems, and the initiating and practicing of a systems perspective; a significant ethical dimension focused on sustainable principles; and increasing the speed at which leaders and others learn, and increasing opportunities for learning. In learning organizations, leaders are increasingly required to be designers, teachers, and stewards, using new skills to build shared visions, to surface and challenge prevailing mental models, and to foster more systemic patterns of thinking (Senge, 1990). In boundaryless organizations, leaders face the challenges of: transforming for tomorrow while doing business today; managing an uncontrollable change process; leading to an unclear destination; dealing with disruption; and confronting the need for personal change (Ashkenas, Ulrich, Jich, & Herr, 1995).

The challenges facing leaders must be viewed within the context that many are used to operating, and were most likely developed to be leaders, in a traditional bureaucratic organization. Learning and boundaryless organizations are both in contrast to traditional bureaucratic organizations characterized by: being highly specialized; completing routine tasks; using formalized procedures; containing a proliferation of rules, regulations, and formalized communication; structured with large-sized units; centralized decision-making; and elaborate administrative structures (Mintzberg, 1983). Organizations that are still predominantly bureaucratic in nature therefore now face the challenge of determining how, if at all, to shift towards more modern models of operation.

The shift to learning organizations requires leaders to consider their frames, perspectives from which leaders view the world (Bolman & Deal, 1991). According to Daft (1999), many leaders are stuck in a limited frame of reference based on their past experience, and it is helpful to broaden their frames to enrich their ability with respect to learning organizations. That reframing can be interpreted through the work of Mezirow (1990, 1991) on transformative learning as requiring leaders to challenge their existing meaning perspectives and to create new ones better suited to their new roles. Meaning perspectives (rule systems, paradigms, or personal frames) consist of structures of assumptions that are used to reason, decide on actions, and make judgments regarding what is important, just, worthwhile, truthful, and authentic (Mezirow, 1991). Leaders develop assumptions about effective leadership from their past experiences and use those to influence their current and future actions, usually to the extent that the assumptions are no-longer questioned. Unfortunately, meaning perspectives can be limited, distorted, and arbitrarily selective (Mezirow, 1991), which in the case of a leadership response to a particular situation can result in distorted perceptions of the situation, a limiting of the response options considered, and possibly to an automatic response without reflection on alternatives.

So, how should leaders develop these new or changed meaning perspectives? Experience is reported as the best teacher for developing leaders (Ready, 1994); however, Conger and Benjamin (1999) also described four main training approaches to leadership development: conceptual awareness, feedback, skill building, and personal growth. Through such approaches, $45 billion was spent on management training by US corporations in 1995, of which an estimated $12 billion was devoted to executive education (Fulmer, 1997). Despite the amount spent on leadership development, Conger (1993) stated that organizations are only just beginning to understand some of the potential tools and experiences that are needed to help managers in more fully realizing their leadership potential, and that educators need to be open to new paradigms and new training approaches. Among the long list of principal learning methods used in leadership training are: case studies, lectures, discussion groups, observed exercises, 'fishbowls,' simulations, and outdoor exercises (Conger and Benjamin, 1999). However, those two authors were critical of the frequent disconnect between adult learning principles and the practice of leadership development, with the exception of action learning programs.

To summarize, in response to changes in the operating environment, organizations are shifting away from bureaucratic models towards a learning orientation and towards boundaryless structures. That shift challenges leaders to change their roles and skills, and also to develop new frames of reference and meaning perspectives. In the face of criticisms of leadership development, organizations need to find new ways of developing their leaders to fit the new requirements. Traditional bureaucratic organizations also face the challenge of beginning and maintaining the building of a learning organization.

Building emotion into a leadership development program

This paper describes a leadership development program designed for a traditional bureaucratic organization in the public sector. That program was designed with two aims: to prepare leaders for the challenges of operating in a learning organization; and to prepare a cadre of leaders to act as change agents in shifting the organization towards a learning organization mode of operation. The setting was a British public sector organization employing 3,300 across five sites. The organization had a long-standing leadership development strategy with three main strands: (a) formal training courses and development opportunities for individuals; (b) bespoke training events and consultancy support for work teams and groups of leaders; and (c) self-directed learning opportunities. The formal training courses contained a mix of trainer-led input on models, theories, and best practice, small group exercises, and sharing of experiences and practice.

From attending the existing courses, all leaders in the organization shared a common language on management and leadership as well as a common understanding of models and theories on: team building, leadership styles, communication skills, strategic planning, change management, learning, motivation, coaching, etc. However, the existing courses had been criticized by some leaders as covering management more than leadership, being more knowledge- and skills-based rather than encouraging reflection on experiences and attitudes, and delivering theories and models more than encouraging leaders to use experience to create their own.

The new program was designed as an optional module on leadership for those who had been through the existing courses, and was designed to challenge existing meaning perspectives, or frames of reference, with the intention of generating leaders who were committed to developing a learning organization. The program design was influenced by the work of Mezirow (1990, 1991) on transformative learning, but with the view that change was needed beyond the cognitive level addressed by Mezirow. Past research had provided empirical evidence that leaders' meaning perspectives can be transformed, for example, Lamm's (1999) study of the use of Action Reflection Learning™ in a corporate leadership program. This design, however, set out to expose participants to an emotional as well as cognitive experience – the aim being to create a *passion* for changing the role of leaders in the organization rather just a cognitive understanding of the need to change behavior. The importance of emotions to leaders was described by Goleman (1998), who reported his analysis of outstanding leaders and the finding that emotional competencies (as opposed to technical or cognitive cues) make up 80 to 100 per cent of those seen as crucial for success. However, the program was designed not to develop emotional competence, but to approach learning through emotional responses to learning materials and methodologies.

The program was designed to take between six and twelve leaders in groups who would meet for three hours every three weeks over a six-month period. At the core of the program was a reading list: Mezirow (1991) believed that meaning perspectives could change following a dilemma resulting from being in an eye-opening discussion of a book. Other authors had written about the learning potentials of book reading, such as Greene (1990) on the use of imaginative texts as occasions for gaining critical consciousness, and Shor and Freire (1987) on reading texts with different perspectives from the learners' as a way of assisting them to 'read the world.'

The reading list was created with the intention of challenging leaders on an emotional level. The selected books were: Tuesdays with Morrie, by Mitch Albom; Long Walk to Freedom, by Nelson Mandela; To Have or To Be, by Erich Fromm; The Story with my Experiments with Truth, by Mohandas Gandhi; The Art of the Impossible, by Vaclav Havel; I Have a Dream, by Martin Luther King; On Becoming a Leader, by Warren Bennis; and Insights on Leadership, edited by Larry Spears. Those readings contained a combination of material written by world leaders and leadership theorists; a combination of speeches, edited chapters, and books; material on philosophy; and a book (Tuesdays with Morrie) about the mentoring relationship between a dying professor and a former student. Between them, the readings required program participants to reflect on such topics as: the purpose and nature of leadership, the qualities of good leaders, the difference between leadership and management, and the difference between having and being on leadership. The reading list was designed to produce a range of emotional responses (e.g. from reading the last speech of Martin Luther King, the details of Nelson Mandela's imprisonment, and about the death of Morrie Schwartz described by Albom).

To take full advantage of the emotional impact of the reading materials, the decision was taken that the program should avoid traditional didactic delivery methods. Instead, other methods were selected that, from a literature review, were identified as being successful in transformative learning. They included:

- Critical incidents - brief descriptions written by learners of significant events in their lives based on a set of instructions that identifies the kind of incident to be described and asks for details of the time, place, and actors involved in the incident and the reasons why the event was so significant (Brookfield, 1990);
- Journals - their uses include: as an educational tool before learning something new, to aid reflection while learning, and as a means of post-reflection; as a tool to support reflective withdrawal and reentry (Lukinsky, 1990); and as a tool to build a documentary trail of how understanding of a problem has changed and to track influences on this shift in understanding (Marsick, 1990);
- Group discussions. According to Brookfield (1986), groups are considered to: encourage the collaborative exploration of experiences and the collective interpretation of learners' individual realities; provide support, information exchange, a stimulus, and source of relevant resources; and provide a venue for experimenting with ideas, opinions, and alternative interpretations and for testing those out in the company of others engaged in a

similar quest. Brookfield and Preskill (1999) outlined many tools and techniques for using group discussions as a way of teaching;

- Distributed learning - the spreading of learning episodes over a period of time. Knox (cited in Brookfield, 1990) found that older adults were able to learn most effectively when learning episodes were distributed according to a rationale dictated by the content, and Mezirow (1990) suggested that ideally learners should meet as a group over an extended period of time to assess action steps taken throughout the process. Conger and Benjamin (1999) reported that distributed learning is rare in individual-based leadership development training, where programs are generally short, ranging from a few days to a few weeks;
- Narratives. Dominice (1990) described the use of educational biographies in an adult education seminar, whereby students presented life histories in the light of the education they had received and then over the following weeks produced new written narratives.

Comparing the designed program to Mezirow's (1991) process for the transformation of meaning perspectives: book readings and group discussion would provide dilemmas to encourage change; readings, discussions, reflection, journaling, and exploring critical incidents would enhance awareness of the context of beliefs and feelings, encourage the critique of underpinning assumptions and premises; reflection and journaling would help identify and assess alternative perspectives; and narratives of commitment and distributed learning would assist in decisions on new perspectives and allow for action to be taken based upon those new perspectives.

The participants

The program was piloted between January and August 1999 at two locations in the UK. All 18 participants were in public sector managerial positions ranging from first-rung managers up to experienced senior managers of large teams. Participants came from work areas dealing with: data collection and analysis; information systems; finance; corporate strategy; methodology; and human resources. Their educational qualifications ranged from the equivalent of a high school diploma though to Master's degree level. Group A consisted of six middle managers responsible for teams of between 3 and 12 people and with between 4 and 24 years of experience. Group B consisted of 12 junior to senior managers responsible for teams of between 5 and 80 people and with between 5 and 25 years of experience. Of the 18 on the pilot, six were women, two left the organization before the program finished, and two others left the program before the mid-point.

Evaluation process

The trial program ran in the first half of 1999. Mid-way through, it was decided that an external evaluation was necessary to provide internal organization stakeholders with an independent perspective on the program design and impact. The second author acted in this capacity. The evaluation model was based on a qualitative case study design within one organization. Yin (1994) suggested the need for multiple sources of evidence in case study data collection so as to address a broader range of historical, attitudinal, and behavioral issues as well as to allow for data triangulation. Data were therefore collected through analysis of: end-of-meeting evaluation forms; participants' written narratives of commitment; a questionnaire sent to participants four weeks after the program; a transcript of one meeting selected at random; and a focus group held three months after the end of the program. The evaluation tools were designed in collaboration with participants.

The authors were keen to also collect data from participants' staff and managers; however, staff changes over the six months' of the program and the following three months' of post-course evaluation, meant that very few participants retained the same staff or the same manager over the full length of the program. Participants also expressed concern that many of the impacts of the program would become observable over a longer period of time than covered by this initial research. It was therefore decided not to seek data from the few staff and managers who could comment on pre- and post-course behaviors. Participant involvement in the data collection was voluntary, resulting in less than full response for each data collection method. The findings were subsequently validated by reporting back findings to all participants .

Results

Evaluation results are reported under three headings: impact of the program on participants; behavioral impacts; and reactions to the program design.

Impact of the program on participants. Outputs of post-course questionnaires, post-course focus groups, meeting transcripts, and end-of-meeting evaluation forms were analyzed to identify the three outcomes of changes to meaning perspectives described by Jarvis (1992): transformed perspectives, emancipated cognitive distortions, and new conceptual frames of reference.

Transformed perspectives. Most participants reported that their view of leadership was changed. For some, the change took the form of a broadening: "My view of leadership has broadened and I now appreciate more fully the nature of leadership (and followership) at all levels;" "My view of leadership has grown;" and "I now have a much wider appreciation of what others see as leadership." For some, the change was a realization that they need to challenge their own leadership behaviors: "I now understand the importance of being a good follower, and I'm trying to act that way myself," and "I now see the need to act as a servant leader, asking others how I can help them to achieve their goals."

Emancipated cognitive distortions. Several participants reported that the program had encouraged them to question certain beliefs about leadership they held previously. Those included beliefs on: their suitability for leadership ("My view of leadership has changed greatly. I have gained in confidence, both that I have a leadership role to play and that I have the necessary qualities to fulfill the role well"); their desire for a leadership role ("I now see the difference between being a manager and a leader, and I'm not sure I want to be a leader"); the importance of various aspects of the leaders' role ("I now place more emphasis on vision and the people-side of leadership"); and the process of leadership development ("I gained a realization that techniques get you only part of the way. You can't fake good leadership – the lack of authenticity would show through.")

New conceptual frames of reference. Participants reported that they gained new conceptual frames of reference as a result of combining readings on leadership with group discussions. Those took the forms of new leadership concepts, new philosophies, new role models, appreciation of other perspectives, and new theories.

Impact on behavior. As Conger and Benjamin (1999) stated, "it is important to see conceptual learning as only a first step in the process of learning about leadership" (p. 46). The extent of changed meaning perspectives should therefore be assessed in part through evidence of behavior changes. This was discussed in post-program focus groups with participants, who felt that it was too soon to expect many observable changes as a result of the program. Specific changes in behavior reported by participants included:

- Greater emphasis on servant-leadership behavior - "I am more open to admitting my lack of expertise, more confident to ask for help; acting more as a servant-leader and asking how I can help staff;"
- Increased risk taking - "The course has given me the confidence to take risks, and if you want to change things then you have to take risks;"
- Greater commitment to being a leader – "I now appreciate the distinction between having and being on leadership, and I am committed now to being a leader rather than to having a leadership position;"
- Changes to leadership styles - "I have changed my leadership approach. I used to tell people what to do, whereas my approach now is one of facilitation;" "As a leader, I now spend more time trying to understand the concerns of my staff. I am more honest with them about likely changes and my own plans;"
- Encouraging own staff to develop as leaders - " I encourage them to talk more openly about leadership issues;"
- Providing staff with greater level of support - "Greater delegation and empowerment - "I step back before diving in. I work with others to develop joint solutions. I have started asking my staff 'what can I do to help?'"
- Greater openness on leadership - "I talk more frequently about leadership with my colleagues;"
- Changed leadership role - "I spend more time thinking about strategy and visions;"
- Inviting feedback on leadership performance – " I invite feedback from staff more frequently about myself as a leader and about how the work is done."

Reactions of participants to the program. Participants' reactions to the program took three forms: reactions to the program design, comparisons between the program and traditional leadership development training, and comments on improved reflection skills. Taking each in turn:

Reactions to the program design: Participants reacted positively to many of the methodologies, although no single methodology received universal acclaim. Book readings combined with group discussions based on those books were viewed as having the greatest contributing factor to participants' learning in the program. In post-course evaluations, all participants agreed that they learned 'a lot' or 'quite a lot' from the readings and only one participant perceived s/he had learned little from group discussions. One participant stated that, "So much of what comes from the course depends on the discussion groups and group dynamics within these. They can help to make sure you do the readings and journal writings." Another commented that, "The readings greatly improved my self-awareness."

There was broad agreement that the group discussions support learning over and above the benefits of reading the books. As participants commented, "The group discussions helped me to understand followership - I didn't get the importance from the readings alone;" "The group discussions helped greatly in translating the readings into the a context I could understand - considering how it affected me and how I could applied it in our organization;" and "The group discussions gave me the confidence to apply the reading material - other participants were supportive and encouraging."

Group discussions based on participants' critical incidents and examples of leadership from within the organization were also well received. However, of the various methodologies built into the program, journal writing and narratives of commitment received the least positive reaction, with reactions spread across the spectrum from 'learned nothing' to 'learned lots.' One participant stated that, "I found journal writing a useful experience – it was very useful to continually record my thoughts and compare them with others in the group, and continually assess the merits of my own views and opinions. The journal has proved useful for future reference." Another, commenting on narratives of commitment, stated, "The request to complete narratives was excellent to consolidate all my learning. It provided a means of setting targets, and having a future form of reference. My Narrative is dynamic and will change in the future."

In addition to those aspects of the program already mentioned, participants' reacted positively to negotiated agendas ("I benefited from a different method of learning, including the liberating experience of not being confined to learning from a set agenda or syllabus"), distributed learning ("The format and structure was much better than an intensive one week course."), and discussions controlled by the group rather than the trainer. Where groups invited guest speakers into the program, evaluation forms also showed a positive reaction.

Comparisons between the program and traditional leadership development training. It was interesting to explore participants' reactions to the program given its difference from the previous management and leadership training courses they had attended. Most agreed that the new program was a useful supplement to those traditional courses, adding an extra dimension to their development. As one stated, "Past courses were useful introductions to new models, and made me open to the thought of learning more about leadership. The new program gave me some ideas for taking things a bit further and made it clearer what was leadership and what was management." A second participant stated that, "Reflections on Leadership enabled me to learn more about my attitudes and my own style whereas past courses were about tools and techniques, and they didn't turn me into a leader."

Reflections on results

The experiences of the pilot program have provided some initial evidence to support the claim that emotions can be used in workplace programs to develop leaders beyond the cognitive level - to move them into action after they understand the need to change and understand the theories, models, and techniques. That evidence was reflected in participants' comments of how the program developed them beyond their experiences of previous leadership programs, and was also reflected in self-reported accounts of behavior change. Participants' comments during the program, and in subsequent evaluations, provided evidence of an increased commitment to change behaviors and to change the organization. The evaluation findings also provided preliminary evidence that carefully selected reading material, facilitated discussions, and reflective writing exercises can combine to encourage an emotional response as part of learning. Some specific issues were also raised by the program design and evaluation, and these are discussed briefly in the following paragraphs.

Although the evaluation evidence supports the view that the reflective and emotional approach of the program produced changed meaning perspectives in participants, there remains the concern that the participants' passion for change will be quashed by the remainder of employees in the workplace (an issue of learning transfer). Conger and Benjamin (1999) described this concern as the failure to build the critical mass, which often comes from, among other factors, a shared language and a set of stories about what is valued. To minimize the effects of small participant numbers, support structures have now been set up, and others are planned: with program alumni still meeting on a regular basis, sharing their experiences via an electronic database, inviting leaders to address them as a group, and exploring options for mentoring with leaders internal and external to the organization.

The program operated as a pilot in 1999, mainly because it was viewed by the HRD function as so different from traditional programs run in the organization. For example, no other program or course used book readings, or distributed learning to the same extent, or such techniques as journal writing or formal critical incident techniques.

There was therefore some concern as to how the program would be received by key stakeholders in the organization. Introducing it 'through the back-door,' as an optional module of a long-standing leadership development strategy, allowed the HRD function to collect evidence on the impact of the program design for use in arguing for an expansion of the program in later years.

The evaluation results also raise some interesting issues for HRD teams inside organizations. On an operation level, they emphasize the need to continue to explore different delivery mechanisms for the development of leaders, including the use of reading circles, study groups, and action learning sets. They also raise the need for HRD teams to reflect on whether their existing leadership development programs go far enough in challenging participants emotionally. The program described in this paper produced in participants a degree of passion for change that past leadership programs had failed to achieve, in part because of the cognitive focus of those programs on models, theories, and techniques. In those programs, leaders were not sufficiently challenged to explore their passions, their commitments as a leader, the pains and glories of their past experiences, and the emotions of learning closely with a group of fellow leaders over an extended period.

At a strategic level, the program raises questions about how HRD teams can best assist organizations in the shift away from bureaucratic models – and how best to prepare for that shift when the HRD function is already several steps ahead of the organization's thinking. Radical development programs are unlikely to be sanctioned widely in bureaucratic organizations before significant commitment is given by senior leaders to building a learning organization. How then can the HRD function be ready for rapid responses to those commitments when they are eventually made, and is such 'back-door' development (as described in this paper) an appropriate route for advance experimentation? This raises questions about the role of the HRD function in creating momentum towards a learning organization with or without the agreement of key organizational stakeholders - should the HRD function, for example, be developing change agent leaders and planting them around the organization as a means of shifting the organizational culture, even when the senior leaders are not as yet committed to the need for such a change?

Contribution to new knowledge and limitations

The purpose of this paper was three-fold: to raise the issue of developing leaders at an emotional level; to describe a pilot program for such an approach; and to describe the preliminary evaluation of that pilot program. The empirical part of the paper suffers several major limitations: there has been only one run of the program so far and in only one organization; the sample size was very small (18); participants were self-selected and were biased towards white, male, and middle class; and there was a potential bias from non-response to post-program questionnaires and requests for written narratives and involvement in post-program focus groups.

However, the evaluation results have shown that, in the particular organization, the eighteen leaders benefited from the new program design. The conceptual arguments for leadership development through emotions, when combined with the evaluation results, suggest that HRD practitioners designing leadership development strategies should consider the potential benefits of including a more reflective component in their programs (based on critical incident techniques, journaling, book readings, groups discussions, and narratives of commitment).

In response to the need for further research, the program will be adapted based on the evaluation results, run for a further 40 participants in 2000, and re-evaluated in twelve months' time, allowing for the submission of an updated paper to the 2001 AHRD conference. Further research is needed to assess the generalizability of the findings to leaders of all types in other organizations using a considerably larger sample. Further papers will also explore other implications of emotional approaches to leadership development.

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Investigation of a Leadership Development Program

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This study used Sashkin's Visionary Leadership Theory (VLT) to investigate whether leadership training at a certificated military leadership school affects individual leadership style and characteristics. A quasi-experimental recurrent institutional cycle research design was used to examine leadership scores over a three-year period, measuring effects immediately after the training intervention and one and two years later. Findings support VLT and suggest that exposure to the transformational leader has long-term effects that continue beyond the training intervention.

Keywords: Leadership, Military, Training

Air University, located at Maxwell Air Force Base, Alabama, is the institution central to Air Force leadership development. Air Command and Staff College (ACSC) is designed to prepare mid-grade officers for greater command responsibility; most future Air Force leaders will come from this select cadre. The college has attempted to implement a curriculum that is based on and incorporates concepts of transformational leadership (Sashkin, 1992; 1996a). One of the goals of this transformational approach is to foster the transference of transformational leadership from the leaders to the students (followers).

The theory of transformational and transactional leadership originated in the late 1970s (Burns, 1978). Some, (e.g., Sashkin, 1998) equate transactional leadership with management. That is, there is an exchange involved, a *quid pro quo* that provides the follower with something in exchange for performing as the leader directs. The "something" may be material, such as money, or nontangible, as in praise or affiliation. Transformational leadership, on the other hand, denotes revolutionary change that necessitates exploration of fundamental values and beliefs (Koerner & Bunker, 1992). The goal is to develop a shared vision and a unity of purpose among leaders and followers (Farley, 1992), and to develop followers who can themselves take on leadership roles when necessary (Burns, 1978; Sashkin, 1998). Visionary Leadership Theory (Sashkin, 1998; Sashkin & Rosenbach, 1998) takes the concept of transformational leadership to its logical conclusion. It integrates behavior, personal characteristics, and organizational culture into a systems approach to leadership.

In the fall of 1995 a longitudinal, quasi-experimental study began at ACSC to determine if a relationship existed between attending the school and changes in the students' transformational and transactional leadership characteristics. The study design included the concepts of change developed by Golembiewski, Billingsley and Yeager (1976), Golembiewski and Billingsley (1980) and elaborated by Thompson and Hunt (1996). Sashkin's (1996b) TLP, an extensively-researched assessment tool, was used to determine whether any changes observed in students' leadership behavior and characteristics were examples of alpha, beta, or gamma change, as defined by Golembiewski, et al. (1976). The Organizational Culture Assessment Questionnaire (OCAQ) (Sashkin, 1990) was used to provide a test for equivalence required by the institutional cycle design.

The central purpose of this initial descriptive study was to determine whether any changes in follower leadership style following attendance and completion of ACSC were of the nature of alpha change - simple improvements, beta change - changes in students' perceptions of the measurement scales, or gamma change - change in the fundamental dimensional structure of perceptions. Psychometric characteristics of *The Leadership Profile* (TLP) (Rosenbach, Sashkin, & Harburg, 1996) were also examined. The desired change forecast by the ACSC program is that the experience of operating in a transformational environment will result in a significant increase in transformational leadership behavior and characteristics, from the time the followers enter the environment to the time the followers conclude their time in the environment, a period of 10 months. The following specific hypotheses were investigated.

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- H1 - Participants in the same year group, as measured by TLP scores before and after attending ACSC, will show an increase in both transactional and transformational scores.
- H2 - Participants in the same year group will show a continuing increase in both transactional and transformational TLP scores one year after the intervention compared to their scores taken immediately after the training intervention (H2A) and between one and two years after the intervention (H2B).
- H3 - The improvement in TLP scores post-intervention will be equivalent for all classes. All should improve. There should not be dramatic differences because both classes are selected the same way and go through the same program.

Sample Selection and Data Collection

The sample consisted of United States military field grade officers (major/lieutenant commander and lieutenant colonel/commander) and equivalent federal service civilians enrolled in the 1995-96, 1996-97, and 1997-1998 ACSC class. The total sample population was U. S. military officers attending ACSC in academic years 1995 (*N*=590), 1996 (*N*=587), and 1997 (*N*=592).

The recurrent institutional cycle design (Campbell & Stanley, 1963) was used to examine changes in leadership scores in the TLP for different groups obtained at the same and at different points in time. Data was collected from ACSC Classes 1994-1995, 1995-96, and 1996-97 as shown in Figure 1.

Figure 1. Overview of the Collection Design using the ACSC Leadership Database

	Data Collected at Beginning of School Year	Data Collected at End of School Year	Data Collected One Year After Graduation	Data Collected Two Years After Graduation
ACSC Class 94-95			ACSC Class 94-95. Data Collected: TLP (Self) Collected:: Apr 96	ACSC Class 94-95. Data Collected: TLP (Self) Collected Apr 97
ACSC Class 95-96	ACSC Class 95-96. Data Collected: TLP (Self) Collected Sep 95	ACSC Class 95-96. Data Collected: TLP (Self) & OCAQ Collected May 96	ACSC Class 95-96. Data Collected: TLP (Self) Collected May 97	
ACSC Class 96-97	ACSC Class 96-97 Data Collected: TLP (Self) Collected Sep 96	ACSC Class 96-97 Data Collected: TLP (Self) & OCAQ Collected May 97		

Demographic Analysis

Demographic crosstabulation analyses were conducted to determine if any significant relationships existed between the ACSC classes' TLP scores in each of the three leadership categories. Demographic variables analyzed were: (1) Rank, (2) Service, (3) Source of Commission, (4) Aeronautical Rating, (5) Gender, (6) Race, (7) Marital Status, (8) Military Spouse, (9) Number of Children, and (10) Highest Level of Education. In reviewing all possible relationships, only four were statistically significant, and were so small as to be practically of trivial importance.

Results

Hypothesis One

Hypothesis One posited that TLP scores for trainees in the same class would increase following the training intervention. The hypothesis was tested using two samples: a comparison of the ACSC Class 95-96 before and after the intervention and a comparison of ACSC Class 96-97 before and after the intervention.

Comparison of Classes

To assure initial comparability of the two classes, independent t-tests between Class 95-96 pre-intervention and Class 96-97 pre-intervention scores were performed for each of the three leadership categories of the TLP. Results showed no significant difference between the two classes' transactional behavior scores (p=.521) (Table 1) or transformational behavior scores (p=.118) (Table 2). However, the Class 95-96 pre-intervention transformational characteristics score was significantly higher than that of Class 96-97 (Table 3). This result may reflect changes in the overall Air Force culture between two points in time. Or, it may reflect perceived differences in ACSC culture as manifested in the OCAQ analysis discussed later in the Synthesis section. In any case, further analyses of data within each group and between the two groups showed effects that could not reasonably be attributed to the confounding effect of the initial difference in TLP transformational characteristics scores.

Table 1
Class 95-96 Pre-intervention to Class 96-97 Pre-intervention, Transactional Behavior

Group	N	Mean	Standard Deviation
ACSC Class 95-96 Pre-intervention	433	40.670	4.827
ACSC Class 96-97 Pre-intervention	277	40.336	7.747

Variance	t	df	p	Difference in Means	95% CI
Separate	0.642	413.8	0.521	0.334	-0.688 to 1.356
Pooled	0.708	708	0.479	0.334	-0.592 to 1.260

Table 2
Class 95-96 Pre-intervention to Class 96-97 Pre-intervention, Transformational Behavior

Group	N	Mean	Standard Deviation
ACSC Class 95-96 Pre-intervention	433	82.938	8.003
ACSC Class 96-97 Pre-intervention	275	81.804	10.189

Variance	t	df	p	Difference in Means	95% CI
Separate	1.564	483.7	0.118	1.134	-0.290 to 2.558
Pooled	1.650	706	0.099	1.134	-0.216 to 2.484

Table 3
Class 95-96 Pre-intervention to Class 96-97 Pre-intervention, Transformational Characteristics

Group	N	Mean	Standard Deviation
ACSC Class 95-96 Pre-intervention	433	75.388	7.201
ACSC Class 96-97 Pre-intervention	275	74.004	7.267

Variance	t	df	p	Difference in Means	95% CI
Separate	2.479	579.3	0.013**	1.384	0.288 to 2.481
Pooled	2.484	706	0.013**	1.384	0.290 to 2.478

* Significant at the .01 level ** Significant at the .05 level

ACSC Class 95-96 Pre-intervention Compared with Post-intervention

Hypothesis One proposed that there would be significant increases in TLP scores after the training intervention. Paired t-tests of Class 95-96 showed significant increases in all three TLP categories. Further, each of the ten TLP scales, showed a significant increase except for Scale 8 (Follower-Centered Leadership) (Table 4).

Table 4

Pre-intervention and Post-intervention TLP Scores for Class 95-96

Scale	N	Mean	Mean Diff.	SD Dif	df	t	p
1: Capable Management	282	Pre: 20.223 Post: 20.652	-0.429	2.658	281	-2.711	0.007*
2: Reward Equity	282	Pre: 20.206 Post: 20.645	-0.440	2.545	281	-2.902	0.004*
3: Communication Leadership	282	Pre: 19.390 Post: 19.745	-0.355	2.674	281	-2.227	0.027*
4: Credible Leadership	282	Pre: 22.656 Post: 22.926	-0.270	2.295	281	-1.972	0.05**
5: Caring Leadership	282	Pre: 20.727 Post: 21.025	-0.298	2.510	281	-1.993	0.047**
6: Creative Leadership	282	Pre: 19.638 Post: 20.043	-0.401	2.692	281	-2.522	0.012**
7: Confident Leadership	282	Pre: 20.259 Post: 20.564	-0.305	2.549	281	-2.009	0.045**
8: Follower-Centered Leadership	282	Pre: 17.780 Post: 17.794	-0.014	2.634	281	-0.090	0.928
9: Visionary Leadership	282	Pre: 17.429 Post: 18.053	-0.624	2.615	281	-4.007	0.000*
10: Principle-Centered Leadership	282	Pre: 19.365 Post: 19.915	-0.550	2.634	281	-3.504	0.001*
Transactional Behavior (Scales 1-2)	282	Pre: 40.429 Post: 41.298	-0.869	4.668	281	-3.126	0.002*
Transformational Behavior (Scales 3-6)	282	Pre: 82.411 Post: 83.738	-1.326	8.111	281	-2.746	0.006*
Transformational Characteristics (Scales 7-10)	282	Pre: 74.833 Post: 76.326	-1.493	7.412	281	-3.382	0.001*
All Scales Combined	282	Pre: 197.67 Post: 201.36	-3.688	18.115	281	-3.419	0.001*

* Significant at the .01 level ** Significant at the .05 level

Hypothesis Two

Hypothesis Two predicted continuing significant increases in TLP scores in ACSC classes once the participants returned to the mainstream Air Force environment. It was tested using two comparisons: (1) a comparison of ACSC Class 94-95 one year after the intervention with ACSC Class 94-95 two years after the intervention, and (2) a comparison of ACSC Class 95-96 post-intervention compared with ACSC Class 95-96 one year after the intervention. The first comparison partially supported this hypothesis, while the second did not. ACSC Class 94-95 showed a significant increase in both transactional and transformational behavior scores but no significant difference in transformational characteristics (Table 5). ACSC Class 96-97 showed no significant increase in any category (Table 6). In fact, there was a significant decrease in transaction scores when their pre- and post-intervention transactional scores were compared.

ACSC Class 94-95 One Year Post-intervention Compared with ACSC Class 94-95 Two Years Post-intervention

Paired t-tests showed an increase in transactional behavior, but this change was not statistically significant (p=.053). There was, however, a significant increase in transformational behavior (p<0.001). Transformational leadership characteristics did not change significantly (p=.143). The transactional and transformational behavior increases are consistent with the increase delineated the discussion of Hypothesis One above, in which Class 96-97 also showed a significant increase in these categories during the same calendar period.

Table 5

One Year Post-intervention and Two Years Post-intervention TLP Scores for ACSC Class 94-95

Scale	*N*	Mean	Mean Diff.	SD Dif	*df*	*t*	*p*<
1: Capable Management	155	1Yr Post: 20.187 2Yr Post: 20.439	-0.252	2.615	154	-1.198	0.233
2: Reward Equity	155	1Yr Post: 19.690 2Yr Post: 20.194	-0.503	2.707	154	-2.314	0.022**
3: Communication Leadership	155	1Yr Post: 19.265 2Yr Post: 22.716	-3.452	3.570	154	-12.038	0.000*
4: Credible Leadership	155	1Yr Post: 22.806 2Yr Post: 22.716	0.090	3.379	154	0.333	0.740
5: Caring Leadership	155	1Yr Post: 20.981 2Yr Post: 21.239	-0.258	2.916	154	-1.102	0.272
6: Creative Leadership	155	1Yr Post: 20.013 2Yr Post: 20.303	-0.290	2.805	154	-1.288	0.200
7: Confident Leadership	155	1Yr Post: 20.187 2Yr Post: 20.458	-0.271	2.818	154	-1.197	0.233
8: Follower-Centered Leadership	155	1Yr Post: 17.748 2Yr Post: 18.135	-0.387	2.686	154	-1.794	0.075
9: Visionary Leadership	155	1Yr Post: 17.581 2Yr Post: 17.710	-0.129	2.583	154	-0.622	0.535
10: Principle-Centered Leadership	155	1Yr Post: 19.832 2Yr Post: 19.981	-0.148	2.588	154	-0.714	0.476
Transactional Behavior (Scales 1-2)	155	1Yr Post: 39.877 2Yr Post: 40.632	-0.755	4.817	154	-1.951	0.053
Transformational Behavior (Scales 3-6)	155	1Yr Post: 83.065 2Yr Post: 87.168	-4.103	8.495	154	-6.013	0.000*
Transformational Characteristics (Scales 7-10)	155	1Yr Post: 75.348 2Yr Post: 76.284	-0.935	7.913	154	-1.472	0.143
All Scales Combined	155	1Yr Post: 198.290 2Yr Post: 204.084	-5.794	19.175	154	-3.762	0.000*

* Significant at the .01 level ** Significant at the .05 level

ACSC Class 95-96 Post-intervention compared with ACSC Class 95-96 One-Year Post-intervention

Paired *t*-tests for these classes show no significant difference in transactional behavior, transformational behavior, or transformational characteristics scores at training's end compared with scores obtained one year after.

Table 6

Post-intervention and One Year Post-intervention TLP Scores for ACSC Class 95-96

Scale	*N*	Mean	Mean Diff.	SD Dif	*df*	*t*	*p*<
1: Capable Management	116	Post: 20.509 1 Yr Post: 20.095	0.414	3.268	115	1.364	0.175
2: Reward Equity	116	Post: 20.448 1 Yr Post: 19.940	0.509	2.824	115	1.940	0.055
3: Communication Leadership	116	Post: 19.672 1 Yr Post: 20.724	-1.052	10.038	115	-1.128	0.261
4: Credible Leadership	116	Post: 23.043 1 Yr Post: 22.914	0.129	2.390	115	0.583	0.561
5: Caring Leadership	116	Post: 20.871 1 Yr Post: 20.741	0.129	2.839	115	0.491	0.625
6: Creative Leadership	116	Post: 19.750 1 Yr Post: 20.060	-0.310	2.774	115	-1.205	0.231
7: Confident Leadership	116	Post: 20.661 1 Yr Post: 26.543	0.147	2.687	115	0.587	0.558
8: Follower-Centered Leadership	116	Post: 18.009 1 Yr Post: 18.207	-0.198	2.231	115	-0.957	0.340

9: Visionary Leadership	116	Post: 18.034 1 Yr Post: 17.672	0.362	2.083	115	1.872	0.064
10: Principle-Centered Leadership	116	Post: 19.793 1 Yr Post: 19.974	-0.181	2.539	115	-0.768	0.444
Transactional Behavior (Scales 1-2)	116	Post: 40.957 1 Yr Post: 40.034	0.922	5.341	115	1.860	0.065
Transformational Behavior (Scales 3-6)	116	Post: 83.336 1 Yr Post: 84.440	-1.103	13.788	115	-0.862	0.391
Transformational Characteristics (Scales 7-10)	116	Post: 76.526 1 Yr Post: 76.397	0.129	7.053	115	0.197	0.844
All Scales Combined	116	Post: 200.819 1 Yr Post: 200.871	0.052	22.526	115	-0.025	0.980

Very little can be said about this class with respect to Hypothesis Two beyond the fact that Class 95-96 showed absolutely no change in group means or paired results of TLP scores between ACSC completion and one year out. Thus, attending ACSC had no long-term impact on these respondents.

Hypothesis Three

Hypothesis Three testing required comparing TLP scores between classes after training, under the assumption that the training would produce equivalent post-training changes. It was predicted that the improvement in post-intervention TLP scores would be the same for all classes. While all should improve, there should not be dramatic differences because both classes were selected the same way and went through the same program.

ACSC Class 94-95 One-Year Post-intervention Compared with ACSC Class 95-96 One-Year Post-intervention

This two-sample comparison supported the hypothesis. No significant differences appeared in comparing one class to another one year following the intervention. Therefore the results indicate equivalence between these two classes (Tables 7-9).

Table 7

Class 94-95 One Year Post-intervention to Class 95-96 One Year Post-intervention, Transactional Behavior

Group	*N*	Mean	Standard Deviation
Class 94-95 One Year Post-intervention	187	40.059	4.398
Class 95-96 One Year Post-intervention	154	40.442	5.136

Variance	*t*	df	*p*<	Difference in Means	95% CI
Separate	-0.730	302.8	0.466	-0.383	-1.414 to 0.649
Pooled	0.741	339	0.459	-0.383	-1.398 to 0.633

Table 8

Class 94-95 One Year Post-intervention to Class 95-96 One Year Post-intervention, Transformational Behavior

Group	*N*	Mean	Standard Deviation
Class 94-95 One Year Post-intervention	187	83.273	7.658
Class 95-96 One Year Post-intervention	154	84.468	11.677

Variance	*t*	df	*p*<	Difference in Means	95% CI
Separate	-1.091	254.3	0.276	-1.195	-3.351 to 0.962
Pooled	-1.134	339	0.258	-1.195	-3.267 to 0.877

Table 9

Class 94-95 One Year Post-intervention to Class 95-96 One Year Post-intervention, Transformational Characteristics

Group	*N*	Mean	Standard Deviation
Class 94-95 One Year Post-intervention	185	75.395	7.372
Class 95-96 One Year Post-intervention	282	76.326	7.870

Variance	t	df	$p<$	Difference in Means	95% CI
Separate	-1.300	411.4	0.194	-0.932	-2.340/0.477
Pooled	-1.283	465	0.200	-0.932	-2.359/0.496

ACSC Class 95-96 Post-intervention Compared with ACSC Class 96-97 Post-intervention

Comparisons of these two classes fully supported the hypothesis. There was no significant difference between the classes' transformational behavior, transformational behavior, and transformational characteristics group mean scores. It is reasonable to conclude that the two classes are equivalent (Tables 10-12).

Table 10
Class 95-96 Post-intervention to Class 96-97 Post-intervention, Transactional Behavior

Group			N	Mean	Standard Deviation
Class 95-96 Post-intervention			282	41.298	5.034
Class 96-97 Post-intervention			419	41.852	4.350
Variance	t	df	$p<$	Difference in Means	95% CI
Separate	-1.508	542.4	0.132	-0.554	-1.276 to 0.168
Pooled	-1.551	699	0.121	-0.554	-1.255 to 0.147

Table 11
Class 95-96 Post-intervention to Class 96-97 Post-intervention, Transformational Behavior

Group			N	Mean	Standard Deviation
Class 95-96 Post-intervention			282	83.738	8.730
Class 96-97 Post-intervention			419	84.279	9.249
Variance	t	df	$p<$	Difference in Means	95% CI
Separate	-0.786	625.8	0.432	-0.542	-1.894 to 0.811
Pooled	-0.778	699	0.437	-0.542	-1.909 to 0.826

Table 12
Class 95-96 Post-intervention to Class 96-97 Post-intervention, Transformational Characteristics

Group			N	Mean	Standard Deviation
Class 95-96 Post-intervention			282	76.326	7.870
Class 96-97 Post-intervention			420	76.643	13.244
Variance	t	df	$p<$	Difference in Means	95% CI
Separate	-0.397	690.7	0.692	-0.317	-1.884 to 1.251
Pooled	-0.361	700	0.718	-0.317	-2.039 to 1.406

* Significant at the .01 level ** Significant at the .05 level

Synthesis Discussion

- Hypothesis One was supported. ACSC Class 95-96 pre-intervention compared with post-intervention as well as ACSC Class 96-97 pre-intervention compared with post-intervention showed an increase in both transactional and transformational TLP scores. Simple alpha change was evident in that both classes were responding to the curriculum.
- Hypothesis Two was partially supported. ACSC Class 94-95 one-year post- intervention compared with two years post-intervention showed a significant increase for transformational behavior scores but not for transactional behavior or transformational characteristics scores. ACSC Class 95-96 post-intervention compared with one year post-intervention showed no increase in scores. ACSC Class 94-95 possibly showed beta change while ACSC Class 95-96 showed simple alpha change. These findings are consistent with Sashkin's assertion (1995, 1996a, 1996d, 1996e, 1996f) that transformational leaders build cultures that effect change in the

participants over time. Further, exposure to both the transformational leader and curriculum results in continued individual improvement after the intervention, while exposure to the transformational curriculum alone may not.

- Hypothesis Three was fully supported. There was no significant difference between ACSC Class 94-95 one-year post-intervention and Class 95-96 one-year post-intervention or between ACSC Class 95-96 post-intervention and Class 96-97 post-intervention. One-fourth of the Class 94-95 respondents made unsolicited comments reflecting positively on their experience and leadership learning. This supports the suggestion in Hypothesis Two, that exposure to both the transformational leader and curriculum resulted in continued individual improvement after the intervention, while exposure to the curriculum alone did not.
- The Control test for equivalence was not supported. ACSC Class 95-96 OCAQ scores were significantly different from ACSC Class 96-97; however, demographic analysis showed no significant difference between samples. Findings are congruent with speculation that a shift in commandants over the period of the study had an impact on the respondents' view of their environment. Findings support Hypotheses Two and Three conclusions that transformational leaders build cultures that enable followers to continue their development as leaders even after followers are no longer exposed to the transformational leader. Thus, exposure to both the transformational leader and the training curriculum resulted in continued improvement after the intervention, while those exposed to the curriculum alone showed no such subsequent improvement.

Conclusion

This study explored the question "Does training make a difference?" using Sashkin's Visionary Leadership Theory as applied to a certificated military leadership school, Air Command and Staff College. Using a recurrent institutional cycle design, we examined three classes over a three-year period to determine the effect of a transformational educational intervention immediately after the intervention and one and two years later. While it was not within the parameters of this study to determine whether group changes were caused by the original architect and transformational leader of the program, findings of this longitudinal study provide some support to Sashkin's Visionary Leadership Theory. That is, the results show that a leadership development curriculum based on transformational leadership can, in all likelihood, result in significant increases in leadership assessment scores after the training intervention. Moreover, these findings suggest that exposure to the transformational leader as well as to an organizational culture and a training curriculum supportive of and focused on transformational leadership results in continued increases in assessed leadership scores, measured one and two years after the intervention, while exposure to the transformational curriculum and culture alone do not appear to produce such continuing effects.

The study has two main limitations: self-report data and generalizability. The former is in large degree counterbalanced by the longitudinal design, and future research may answer for the latter. Of greater importance is the value of these findings to HRD. The study provides support for Sashkin's Visionary Leadership Theory by linking it to a training intervention. It strengthens Sashkin's position that the presence and participation of the visionary leader is important by showing what happens to respondents when the visionary leader is absent but the intervention (i.e. curriculum) is the same. Finally it provides support for the use of Golembiewski, et. al., (1976) alpha, beta, gamma change evaluation model in a leadership training program. One of the fundamental tenets of HRD is to generate training that produces positive change. This study clearly demonstrates that it is possible to produce such change in a significant area of interest to HRD: namely leadership.

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Training Companies Speak Out on HRD Industry Changes: Symposium Introduction

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Sweeping changes are occurring in both the way in which the human resource development field is structuring itself and the manner in which new electronic media are being used to deliver training to organizations. This symposium explores the process of consolidation in the field, how the internet is being used to deliver training, and the effect of computers on the facilitation of simulations.

Keywords: Consolidation, Internet, Simulation

In a recent article in Business Week (Grover, 1999), reviewing some of the difficulties involved in the merger between Franklin Quest and the Covey Leadership Center, Stephen Covey was quoted as saying that "it is much different when you go through it than when you look at it from some academic ivory tower" (p.49). Many similar experiences have taught scholars the serious difference between theory and practice. In fact practitioners often have many things to teach scholars, if we give an attentive nod to what they are doing. The academic community, as the AHRD tries to demonstrate on a continuing basis, can also provide valuable insights for even the very best practitioners. This symposium was organized to expose scholars to some changes occurring in the business of HRD and introduce a couple of innovations in delivery mechanisms.

In the business arena, the field of human resource development is making a number of rapid changes in the way in which the industry is being structured and in ways in which services are being delivered. Structural innovativeness is illustrated by the creation of alliances or partnerships (Limerick and Cunnington, 1993, pp. 98-101) among companies that were heretofore independent entrepreneurs. These mega-companies are designed to provide "one-stop" shopping for human resource development needs. Where the Ford Motor Company, for example, may have dealt with 2,500 different companies providing training services, in the future it may contract with a single conglomerate.

Dr. Brent D. Peterson, vice president of the Franklin Covey corporation and director of their Center for Research & Assessment, has been involved directly in some of the consolidation activities occurring in the field of human resource development. He describes some of the trends that are taking place and forecasts some of the consequences.

When Bill Gates was asked (Novak, 1999) how to make contemporary companies more effective, we were not surprised that he listed twelve ways to make digital information flow an intrinsic part of a company. Gates explained that digital electronic systems may "disintermediate" you by creating ways in which "buyers and sellers can easily find one another without taking much time or spending much money." To illustrate how changes occur, Gates cited the case of Egghead, a retail software chain, that, after struggling for several years, closed all of its physical stores nationwide in 1998 and set up shop exclusively on the Internet as Egghead.com.

Judy Peterson is vice president, product development, for QuicKnowledge.com, an innovative company that provides training over the Internet. She has been involved directly in the establishment and development of all aspects of QuicKnowledge.com and explains the "working knowledge" paradigmatic base used in formulating QuicKnowledge products, training course configurations, and an evaluation model. QuicKnowledge.com is rapidly becoming the site of preference for solving training needs.

More than ten years ago, Keiser and Seeler (Craig, 1987) noted that "as computer technology has become more sophisticated, it has become more reliable and simpler to use. Game and simulation design can make better use of the technology rather than be governed by it. Expert systems—software programs which can act as a consultant to the learner—have the potential of playing a major role in the future" (pp. 458-459). Their prediction has come into full fruition with the customization of simulations for individual companies and individual managers. Technology has enabled designers to condense time and deliver results immediately.

Rachel Bello, C.Paige Hinkson, and Tracy Lotz, with Executive Perspectives of Brookline, Massachusetts, comprise a team involved with an Employee Retention computer-based simulation that helps managers develop

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skills needed to retain employees, even when more lucrative opportunities present themselves. They explain the theoretical base of the simulation and demonstrate its innovative features.

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The Working Knowledge Paradigm

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Advancing Internet technology has opened previously unimaginable opportunities to streamline the corporate training process. Human Resource Development professionals have a responsibility to identify and/or develop new instructionally sound methodologies that will for the first time in history allow businesses to meet all their training needs at a fraction of the cost and the time previously required to address only a small portion of their employees' training requirements.

Keywords: Technology, Instruction, Methods

Corporate training in the United States is a multi-billion dollar investment. Leadership and professional development account for a significant portion of that expenditure. While most companies intuitively know that training in these skills is an investment in their own future, neither corporate managers nor the training community have been able to reliably track and confirm a return on their training dollars in any areas, especially the "soft skills".

The existing approach to training is not responsive to today's training needs. High costs, lengthy training time and a lack of availability prevent the vast majority of people, both at work and at home, from receiving much needed basic soft skills training.

As Internet technology has opened opportunities for less expensive and more convenient soft skills training, industry professionals are eager to take advantage of its universality. This has led the training community to attempt to develop new instructional products that capitalize on the Internet's exciting possibilities. However, for the most part these training courses seek to replicate the typical classroom experience, substituting technical features for instructor interactions and group involvement. This creates a problem for the soft skills instructional designer who must now keep the trainee's interest at the computer for extended periods of time, thus suggesting the need for extensive multimedia and frequent interactions to relieve boredom and maintain attention.

While using the Internet to deliver these programs allows some potential improvements, it does not define a new approach to learning that responds to the needs of today's fast-paced business environment. It merely replaces some of the old technology—classroom instruction that is not individualized and may not be particularly interesting—with media bells and whistles that are required to coax trainees to engage in the material for extended periods of time.

QuicKnowledge.com's Working Knowledge Paradigm is uniquely designed to meet the current business imperatives for managers to have access to broad and practical information that is immediately applicable, relevant and supportive of optimal productivity and job performance. Focusing on the Working Knowledge level of competency provides the opportunity to give employees concentrated, substantive, relevant content that by its nature is engaging and meaningful.

The Working Knowledge Paradigm

What is the Working Knowledge Paradigm? A readily usable understanding of a given skill that permits immediate practical application by producing an intermediate level of competence based on the 80/20 rule. The learning model is based on these assumptions:

1. Acquisition of information/knowledge empowers individuals to try new and potentially more effective behaviors.
2. Best practices exist for the most common and basic business issues and challenges.
3. Adults learn best when they assume responsibility for their own learning objectives and experiences.
4. For most employees, a "working level" of competence is sufficient for a majority of their job responsibilities.
5. In order for new skills to be assimilated and retained, they need to be presented to the learner when they are perceived as relevant and immediately applicable.

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6. The use of specific and effective methodologies can compensate for a lack of natural leadership abilities in many skill areas.

These assumptions form the basis of the Working Knowledge Premise: Most business people would prefer to have at least a basic, simplified understanding of how to consistently and effectively carry out the wide array of business functions that affect their daily performance, than to rely exclusively on unstructured input from their own business surroundings.

Consistent with these assumptions, QuicKnowledge.com has developed a training model that expedites delivery of useful tools, techniques and strategies to develop competence in basic business issues. It provides an opportunity for the participant to define their own learning objectives, test understanding with immediate feedback, and apply newly acquired information to real-life situations. In addition, job aids and worksheets are provided for continuous reinforcement during actual job performance.

Learning Principles

Working Knowledge modules conform to state-of-the-art multi-media instructional design principles. They generate high interest and retention by engaging the learner through generous use of humor and multi-sensory/modal stimulation. The individualized approach includes self-selection of topics, self-pacing, and a level of detail determined by personal choice, all of which have been found to encourage and support knowledge acquisition and comprehension.

The learning model provides for consistent presentations and methodologies, best-practices content, periodic reinforcement, individualized assessment and feedback, and application exercises for a working level of competence.

Current Training Methods

Traditional business training programs seek to provide the maximum amount of information available on a subject, with the goal that all the knowledge gained will be applicable at some time in the future as one's experience expands. Eventually, by retaining all the knowledge that was initially imparted through the training process, and gradually assimilating it into future experiences, the trainee hopefully achieves a high measure of expertise in any given subject. By multiplying the impact over and over again by the number of employees in an organization, productivity is expected to climb dramatically over time. Unfortunately, these desired end results are rarely achieved.

There are approximately 20 different instructional methods employed by the training industry in presenting training material. Of these, the most frequently used is classroom programs, which was employed as part of the training curriculum by over 90% of major corporations in 1998. Workbooks and manuals are the next most-used method, at 74%. Other common methods include videotapes, CD-ROM, Internet, overhead transparencies and audiocassettes. Typically, some combination of methods is employed, and the methods of choice are most often a function of the presenter's experience, the size of the group being trained, and the available budget for out-of-pocket expenses. Primary issues such as content, retention rate and total cost of training are frequently not given strong consideration in selecting the presentation method.

The average classroom training session consists of an offsite presentation to a large group of recipients usually requiring 8 to 24 classroom hours of attendance. This is generally at a cost of $100-500 per person per day, plus travel expenses and per diem, but without regard to the cost of lost work time. A live trainer provides guidance through written materials, experiential exercises, discussion, video or live demonstrations, artificial role-plays, and case study type applications. Timeliness, specific information, pace, individual needs, readiness, relevance, etc., may vary from person to person and session to session. More recently, computer-based training (CBT) has gained some limited acceptance in lieu of classrooms as a presentation medium. However, with the exception of CBT software tutorials, the CBT model is still based on the same conventional content, focus, depth and length of training that has been used for traditional training methods in the past.

Today's typical training activity attempts to maximize the level of expertise to the trainee by presenting in-depth material on both core and peripheral issues. In the process, considerable time is allocated to background and supporting material that has only secondary benefit and documentation is often extensive and difficult to access after the fact. Despite the level of detail provided and the amount of time spent on a given subject, results as measured by performance improvement are typically found to be quite low whenever there is an attempt to measure them.

Based on training survey results by Training Magazine computer-based training was employed by an average of 54% of major companies for 1998. With the emergence of personal computers, the Internet and CD ROM capabilities, computer based training has recently been termed web-based training (WBT), and has become a much more accessible presentation method. For instance, WBT is now available to virtually every individual entrepreneur and all technology-based firms, both small and large, by virtue of the computer hardware/software infrastructure that prevails in these business settings.

Business Training Needs

Resource constraints place major limits on the number of people who can receive formal training, as well as on the number of topics those people can be trained in. Consider this: there is a wide array of subjects that affect the daily performance of business people, ranging from such issues as time management to conducting meetings; from leadership methods to team building; from reading balance sheets to managing projects; and the list goes on and on. Yet from companies with more than 100 employees in the U.S., *less than 50%* of the business managers received *any* structured training in 1997. What is most disturbing is that on average, they received this training for a little more than one subject per person. According to Training Magazine's 1998 Annual Industry Report on Training, U.S. organizations with more than 100 employees trained approximately 58 million employees for an average of 32 hours in the past year. Although this is an impressive number at first glance, it averages little more than one subject per employee, despite the Report citing almost 50 key subjects as being important. It also leaves an estimated 50 million employees who received no formal training at all. Add to this the belief that global training deficiencies are assumed to be even much more dramatic than those of the U.S.

It is very probable that the amount of structured training received by personnel from companies with less than 100 employees was substantially less than for these larger companies. The conclusion: while there are more than a hundred million people in the U.S. alone needing business training, and the number of separate issues they need training on easily amounts to dozens of subjects each, only a meager fraction of the required training is taking place. Meanwhile, the great majority of today's managers, executives and entrepreneurs struggle without specific guidance on key issues affecting their performance.

Despite these criticisms and open questions about effectiveness, the training market continues to grow, and both large companies and individual entrepreneurs clamor for some way to keep abreast of the effects of downsizing, increased technology and the never-ending drive for productivity improvement. At the same time, training budgets are not keeping pace with these demands. This is giving rise to a search by many large and small organizations into innovative and effective new training methods that are lower in cost, simpler to administer, easier to evaluate, and less time demanding.

Working Knowledge Training Course Configuration

The Working Knowledge emphasis, by definition, is on presenting an immediate, useable working knowledge of a given subject. This is done by focusing on the several primary factors that have the most influence on understanding the subject, while also providing supplemental information on a small number of supporting, but complimentary factors. Non-essential material is not covered in the core training session; however, additional information and references guide the trainee on where to obtain comprehensive coverage of the subject, should that be desired.

A summary description of each module is contained on the web site, and is accessible to the potential trainee prior to selecting the course. The complete training module itself consists of the following components:

- Definitions of main terms;
- Extensive navigation capability that allows rapid movement to any point in the training presentation;
- Interactive training session with state-of-the-art graphics, interactivity, animation and extended content linking;
- Printouts of summary notes, forms and/or other supporting material; and

- References on sources that provide in-depth information or training (e.g., Custom consulting, extended seminars, books, etc.).

An online "Managers' Chat Room" and a "Message Board" are also being developed and tested to determine their effectiveness in providing customers with networking and support in applying the working knowledge strategies.

Performance Support

Unlike conventional training activities, whether traditional or online, one of the Working Knowledge Paradigm's primary objectives is performance support. Performance support consists of the application of proactive tools and aids to effectively implement the training. The following performance support activities are an integral part of the training solution.

1. Continuous access to all online material throughout the annual contract period for ongoing reinforcement
2. A process for rapid feedback on questions regarding implementation of any given skill
3. Consultation on methods for integrating soft skills performance support into such business programs as 360 degree feedback and leadership development
4. Coaching tools for both trainers and supervisors on how to apply or improve a given skill within a business setting
5. Unlimited access to all skill subjects, including new releases
6. Access to online material both at work and at home
7. Comprehensive reporting and tracking of the training that has been completed
8. Access by both the customers and their families to subjects covering not only business issues, but also non-business issues like personal development, family relations and parenting that are related to each other and to overall personal effectiveness, either directly or indirectly

Cultural Factors

The Working Knowledge Paradigm is the right idea for the right time. In the Information Age human beings, particularly in the industrialized world, are continually bombarded by an excess of information, consistently causing information overload. This is especially true in the business world, where managers and employees must sift through reams of information to glean that which is relevant and significant. This training model cuts right to those basic elements that provide focus and substance for improving job performance.

There has been a significant change in the employer-employee relationship. Companies no longer provide job security, and employees do not pledge their loyalty. Today's managers are more concerned with their own personal/ professional development than with their continued career path in any given organization. This has created a significant change in the way employers train their employees and in the expectations that employees have for professional development opportunities. Employers are reluctant to invest heavily in employees that may easily leave for a "better offer"; employees seek to develop broad competence and development to prepare for that "better offer".

The result of these cultural factors is a general condition in which intelligent, motivated, relatively sophisticated and upwardly aspiring individuals must take responsibility for their own development. The Working Knowledge Paradigm satisfies the culturally developed expectations of this group.

The Enterprise View

Resources are limited in today's dynamic and cost-conscious environment, and although enlightened organizations affirm that people are their most valuable asset, reality places limits on how much can be invested in the "people side" of the business and still maintain a competitive position. The Working Knowledge training model will allow a company to provide more opportunities for more people to develop critical skill areas without a significant financial investment. Follow-up and evaluation of the model's effectiveness will take place in performance planning and evaluation sessions, as job holders are asked to apply the best practices that have been presented in the training.

The responsibility for improved job performance as well as for career development can be appropriately placed on the individual employee, since the investment is minimal and the material easily accessible. In addition, the modules can be used to supplement the traditional formal training that already exists in the enterprise, again enhancing organizational productivity without a major investment in time or money.

Traditional Approach to Training Evaluation

Human relations, communications, leadership, many business skills—these are called "soft skills." They are called "soft" because they don't lend themselves easily to quantifiable data. The accuracy or defect rate of a product can be measure with an instrument or counted. There is a "right" and a "wrong" way to assemble a part. Data can easily be collected and tracked in technical skill areas. There is a much more direct connection between what an employee knows and how he or she performs a task.

Soft skills can be measured, also, but not so easily. We tend to know more about soft skills than what we apply in our daily lives. For example, most of us know what we should do to be a "good" listener, we could certainly identify or pick our the behaviors that we should exhibit when listening, but few of us use those skills consistently. Paper-and-pencil tests that attempt to assess knowledge acquisition are therefore relatively meaningless in predicting how an individual will actually perform a skill in a real setting. Some training programs include "role plays" in their methodology, but the situations are artificial and the results are usually not documented or reported, anyway.

The only meaningful evaluation of training, and especially soft skills training, comes from determining whether or not the employee is using the skills on the job. To do this, someone has to be there to observe performance and give feedback. While this is perhaps an oversimplification, the most simple way of assessment—a test—is meaningless, and the only really useful way of assessment—performance—is cumbersome and time consuming. The result of this dilemma is the traditional methodology for evaluating soft skills: none.

Working Knowledge Evaluation Model

Companies and the training community know that training has value only as it translates to improved performance. Together they have spent years trying to assess return on the training investment. A number of assessment models exist which are effective. Since these models already exist, what's the problem? Why can't we routinely and accurately evaluate and report the return from the thousands of dollars that are spent on training in the "soft skills"?

The Working Knowledge Paradigm includes a new approach to evaluation, ultimately based on individual accountability for results. This approach focuses on the quality, relevance, and soundness of the material itself and promotes real-world feedback regarding its application in the workplace. The content of the modules will convey the best current thinking and tried-and-true wisdom in presentations that use humor, style, and state-of-the-art technology and methodologies to maintain the customer's interest, provide interactivity, and enhance retention.

However, the customer will assume the personal responsibility to gather feedback from others regarding improved job performance. Appropriate worksheets, assessment forms, and methodologies will be provided to the customer to use in assessing personal performance and monitoring progress.

1. Best practices content (validated through current literature and research);
2. Entertaining and relevant presentation of content (validated by customer feedback);
3. Real-world assessment of improved job performance according to the customer's objectives (validated through customer self-reports and customer surveys online).

Suggested Methodology for Training Evaluation

The trainee and his or her direct supervisor need to answer these questions in a mutual discussion:

1. Does the trainee use the job aids, and how well?
2. What feedback does the trainee get when he or she uses the Performance Feedback document?
3. How well does the trainee use the Performance Feedback document to continually improve performance?
4. On an organizational level, what are the organizational indicators tied to effective performance of this skill?
5. How do those indicators reflect improved performance by people who have completed the training?

The organizational manager and the trainee must take a collaborative approach in answering these questions, and plan whatever reinforcement or coaching is necessary to develop and maintain skill in this area. The Performance Feedback Self-assessment can be used for this evaluation, or other tools can be developed for management planning, follow-up and coaching as the need arises.

Evaluation of training activities is an area of significant controversy for conventional business training programs. The effectiveness of training under the Working Knowledge Paradigm is ultimately based on individual accountability. The customer assumes the personal responsibility to gather feedback from others regarding improved performance in, say, the workplace, while appropriate worksheets, assessment forms, and methodologies are provided to the customer to use in measuring personal performance and monitoring progress.

The Working Knowledge Paradigm is centered on providing training that is immediately useful. The learning goal is successful practical application, not scoring well on a test. To support organizations in assuring transfer of training to the work environment, a Manager's Checklist is included for each module to assist the trainee's immediate supervisor in establishing performance goals before the training and in coaching and assessing performance after the training. In this model, training effectiveness is evaluated where it can and should be done: by the trainee and his or her supervisor. The Working Knowledge principle suggests that training effectiveness evaluation is best and most accurately done by those closest to the job. With this collaborative effort, organizations will see a meaningful return on their training investment.

Training Effectiveness Features

Working Knowledge modules provide focused learning that can be organized according to the customer's learning style and personal needs. They are permitted to access the material according to their own judgment and motivations. Whatever their style or approach, they are given significant support in applying the skills and concepts of the module.

- Effectiveness Indicators to help them focus on the RESULTS that can be achieved in applying the skills
- Application Aids—job aids, worksheets, checklists, reference guides—that enable them to take every action and apply every principle that has been presented in the module
- A Performance Feedback Document (Self-assessment) to allow them to assess their own performance, distribute to others to get performance feedback or to help set performance goals

Conclusion

QuicKnowledge.com's Working Knowledge Paradigm is uniquely designed to meet the challenges of the Information Age, the needs of today's labor, management and executive force in the business world, and individuals and family groups in private life. Fast-paced life and rapidly changing requirements demand that people now be knowledgeable in a wide range of subjects, and that essential information be readily accessible to them when, where, and how it is needed. In a time when personal energy as well as organizational resources are limited and yet more critical than ever, this new paradigm allows people to spend less time acquiring knowledge and more time applying it.

Human Capital Measurement

Joanne Provo
Personnel Decisions International

Organizations have come to realize the value of effective human capital strategies and HRD initiatives. While momentum is building in this area, measurement systems that optimize human capital investments have not kept up. Most HR measures are based on financial accounting techniques that were developed to maximize return on capital, not return on people. These measures are often focused on the efficiency of HR investments and rarely consider the effectiveness or impact of these initiatives.

Keywords: HR Measurement, Human Capital, HR Effectiveness

While there may be some debate over the use of the term human capital, for purposes of this paper it will be used to demonstrate that like other assets that must be invested in to yield value, there is a return on human assets as well. A firm can leverage its human capital by increasing its collective ability to extract the best ideas and solutions from the knowledge of its people. Salamon (1991) uses human capital to refer to the skills, knowledge, and abilities of human beings. Underlying this concept is the notion that these skills and knowledge increase human productivity, and that they do so enough to justify the cost incurred in acquiring them. Human capital theory states that "human capital is the knowledge and skills (physical and intellectual) that an individual possesses that make that individual a productive worker" (Besanko, Dranove, & Stanley, 1996, p. 641).

Problem Statement and Theoretical Framework

Like any asset people should be seen as a source of strategic advantage and invested in as other tangible assets. Lewis (1997) uses the accounting perspective to enhance his case by noting that there is a growing recognition that organizations must invest in all assets appropriately if they intend to be successful in the long term. Further, he makes the point that all organizations need to invest in building intellectual capital and it can no longer be a luxury for a small minority of enlightened companies.

Information and technology are changing the way we deploy human assets, and with this there is a need to explore what it means to effectively manage the human capital that contributes to organizational wealth. It is certainly plausible to believe that what differentiates successful companies will be their accumulation, development, and deployment of human capital. Mirabile (1998) calls human assets the true measure of corporate wealth.

More and more organizations are announcing their plans to strategically manage their intellectual capital and see the cultivation and investment in human capital as an opportunity to enhance their market positions (Bontis, 1996). It is important to note here that the management of human capital is distinctive from managing physical assets and that an entirely different skill set is required. The management of an organization's human assets is going to require a different set of management skills and the incorporation of organizational and measurement systems that appropriately reflects the value of investment in human capital.

Methodology

The methodology used was a conceptual analysis based on the review of human capital measurement literature. The review covers a broad spectrum of scholarly works and also incorporates practitioner-based literature. A consulting model was also reviewed against the prevailing literature to understand the alternative approaches to human measurement and analyze the application problems of many of the prevailing measurement processes.

While many of the works studied agreed on the need for HR measurement and often proposed a particular approach, a comprehensive and agreed upon set of measures has not resulted. Scholar's and practitioners, (Huselid, 1995; Swanson, 1998; Welbourne & Andrews, 1996) have presented strong arguments that investments in human

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capital yield value for the firm, yet these processes often rely on measures typically applied to the valuation of financial and not human assets. Boudreau & Ramstad (1997) present strong arguments against the application of these financial measures to human capital investment valuation. This paper will review the various positions and analyze an alternative approach.

The literature review provides a context for understanding how investments in human capital add value to the firm, discusses various evaluation techniques, and presents cautions against using financial measurement systems for human capital investment analysis. Finally the paper reviews an alternative approach to the positioning of HR investments and presents a process that HR professionals can initiate to demonstrate the value of investment in human capital initiatives.

The Case for Measurement

It is becoming increasingly difficult to participate as a strategic business partner within an organization without demonstrating the value that is generated through investment in the assets that you manage. In the case of human resource professionals that asset is people, an asset long thought to be immeasurable. There is a need for the development of HR measurement systems that accurately demonstrate the value of investment in HR initiatives. Walker and Bechet (1991) say that human resource staff functions need to measure both efficiency and effectiveness. They note that, "Efficiency addresses the relationship between key results and short term human resource activities. Effectiveness addresses the relationship between key results and longer term issues and strategies" (p. 235). They further identify that effectiveness is the extent to which human resources support long term business planning and strategies. Their caution is that efficiency may not be the goal of the human resource function. They provide the following example, "An 'efficient' source of new hires (defined in terms of cost per hire) may indeed be quite ineffective when many of the employees that are hired do not stay with the organization for an adequate length of time" (p. 243). Becker and Gerhart (1996) caution against the use of HR measures at the corporate level. In their view HR practices differ substantially across the business units and facilities and corporate measures may lose some of their meaningfulness.

Boudreau and Ramstad (1997) note that while HR processes have evolved from administrative activities to those having strategic significance, we have not seen a corresponding evolution in human resource measurement systems. Gray (1986) echoes the support of strong information systems, noting that it is difficult for a strategic planning system to reach its full potential without support of the appropriate control systems.

Evidence that a Focus on Human Resources Adds Value

In a review of the theory and practice of demonstrating the financial benefit of human resource development Swanson (1998), summarizes a number of HRD studies that demonstrate how focused and systematic HRD interventions can lead to positive returns. Delery & Doty's (1996) study also shows strong relationships between individual HR practices, such as profit sharing, results-oriented appraisals, and employment security and important accounting measures of performance. Delaney & Huselid's (1996) study suggests "that progressive HRM practices, including selectivity in staffing, training, and incentive compensation, are positively related to perceptual measures for organizational performance" (p. 965). These and other studies have begun to make the case for investments in HRD. The two studies summarized below are frequently cited (Gubman, 1998; Pfeffer, 1998) as solid evidence that investments in HR lead to enhanced financial results for the organization.

Welbourne

The study by Welbourne and Andrews (1996) captured a great deal of attention in that it showed that an investment in human resources was a predictor of long-term survival and viability for organizations. The study focused on 136 non-financial companies that made their initial public offering (IPO) in 1988. These companies were evaluated to determine the extent to which they considered their employees to be a source of competitive value. The prospectus for each of these companies was examined and coded using the following criteria:

1. The company's strategy and mission statements cited employees as a competitive advantage.
2. A training program for employees was mentioned.
3. An officer with responsibility for human resource management was listed.

4. The extent to which full-time rather than temporary or contract employees were used.
5. The employee relations climate.

The documents were also examined to determine if organization-based compensation programs (stock options and profit sharing) were available for all employees or only management.

The results of this study showed that while the companies that valued human resources were initially valued lower at the time of the IPO, those same companies had much higher values and survival rates five years later than those that did not recognize the value of human resources. The results are significant for two reason: 1) this study clearly relates investments in people to organizational success and survival, 2) the financial valuations systems failed to recognize the value of investments in human resources and saw only the costs. It is this second point which surfaces the disconnect between what the financial statements reflect and the true value of an organization. The analysts who were conducting the valuation process to determine the initial IPO price saw employee profit sharing plans as a drain on the returns that would accrue to the stockholder's and the market reacted negatively to firms using their capital for employee reward programs. The analysts were unable to account for the benefit that these policies would have on the efficacy of these organizations and thus they proposed a lower valuation for these companies. In examining these companies five years after the IPO, the researchers found that, "a firm that has a high level of human resource value and a high level of organization-based employee rewards boosts its chance of survival to .92" (p. 911).

Huselid

Huselid's (1995) study was designed to be a comprehensive evaluation of the links between systems of high performance work practices and firm performance. In this study high performance work practices included comprehensive employee recruitment and selection procedures, incentive compensation and performance management systems, and extensive employee involvement and training.

Nearly 1000 firms participated in the study by submitting a questionnaire that had been mailed to the senior HR professional in each of the firms. The results indicated that high performance work practices lower employee turnover and result in greater productivity and corporate financial performance. In fact in this study the magnitude for returns on investments in high performance work practices was substantial. "A one-standard-deviation increase in such practices is associated with a relative 7.05 percent decrease in turnover and, on a per employee basis, $27,044 more in sales and $18,641 and $3,814 more in market value and profits, respectively" (p. 667).

This study is currently being replicated by other researches to see if the results can be substantiated. While future researchers may find varying results in the financial performance associated with these practices, this study initiated that further research and broke ground by demonstrating that effective human resource practices can increase the value of the firm.

Beyond Evaluation

Evaluation techniques for many years have relied on the four levels proposed by Kirkpatrick (1994): reaction (satisfaction), learning results, changes in behavior (transfer), and organizational performance. In many cases, unfortunately, the evaluation of a human resource initiative rarely went beyond the first level (Holton, 1996). Increasingly organizations are expressing an interest in evaluating the results that can be demonstrated by an investment in human capital. The organization may proclaim that people are their most important asset, but that doesn't mean they aren't interested in the return generated for an investment in that asset.

Kaufman & Keller (1994) suggest that evaluation techniques are often underutilized and inappropriately applied in organizations. They identify three reasons for this:

1. The most-used definitions and models of evaluation often are too restricted,
2. we do not ask the right questions for evaluation to answer, and
3. the relationship between ends and means is not made clear in the evaluation, planning, and implementation process. (p. 371)

They propose modifications to Kirkpatrick's model to include the consideration and determination of the value and worth of resources, and an added level, which deals with the impact and consequences in, and for society. They also support the extension of the evaluation model to organizational interventions beyond training.

Phillips (1996) model of evaluation gets right to the issue of effectiveness and performance. The three levels of evaluation in his model are:

1. Measures of Perceived Effectiveness
2. Measures of Performance
3. Measures of Return on Investment (p. 60)

While there are few human resource professional who would question the need to measure beyond perceived effectiveness, there is little agreement and very few step by step guides that show how to measure performance. While human resource professionals readily grasp the concept, there is not a clearly understood approach to demonstrating this value. The mistake that some organizations make is in trying to apply financial ratio analysis and measurement models to human resource initiatives. A discussion of the problems arising from using these models and in particular the Return on Investment (ROI) methodology will be presented in the following sections.

Cost – Benefit Analysis

Swanson and Gradous (1988) presented a model and method for evaluating HRD outcomes for business and industry. Their HRD benefit-forecasting model and the methods that were introduced consisted of the following components: "(1) the *performance value* to result from the HRD program, (2) the *cost* of the HRD program, and (3) the *benefit* resulting from the HRD program" (p. 21). While this approach was relatively simple and straightforward it did provide focus on the performance value as the key component in financial benefit analysis.

Cascio (1987) uses a cost accounting platform for his cost-benefit approach to HR analysis. He recognizes as Swanson & Gradous (1988) do, that performance is a key factor. Cascio introduces the use of a performance ratio to measure individual productivity. He also introduces the Cascio-Ramos estimate of performance in dollars (CREPID) model to value an increase in productivity for an individual. The approach assumes that the employee's salary is an economic value of the employee's labor. The analysis is described as follows:

> CREPID breaks down each employee's job into its principal activities, assigns a proportional amount of the annual salary to each principle activity, and then requires supervisors to rate each employee's job performance in each principal activity. The sum of the dollar values assigned to each principal activity equals the economic value of each employee's job performance to the company. (p. 182)

This measure represents the performance value. Any investment in improving performance could be measured against the cost incurred in increasing that level of performance.

Jarrell (1993) notes that cost-benefit and utility analysis are used most often to evaluate human resource procedures and programs. But he warns, "Using cost-benefit analysis alone, it is difficult to determine or obtain precise estimates of human resource costs and usually impossible to obtain precise estimates of human resource benefits" (p. 239). However, he goes on to say that precise estimates of costs and benefits are not always necessary where the evaluation is intended to support the planning process. Approximate estimates are useful for allowing comparisons among several alternative programs, increasing planners' awareness of kinds of costs and benefits, revealing hidden costs and benefits, and improving the ability of planners to judge value.

Return on Investment (ROI)

Phillips (1996) calls ROI analysis the "ultimate level of evaluation" (p. 61) in the evaluation of the actual return in HR programs. His discussion of when to use ROI illustrates that a measure of this type is not always appropriate. In fact in a table developed to provide guidance on when to use the ROI approach there are only two areas where he finds the use of ROI calculations to be highly appropriate. Those two human resource functions are in Safety and Health and Productivity/Quality Improvement (p.301). The conclusion that can be drawn by human resource professionals is that unless they manage or contribute to the effectiveness of either of these two functions they are unable to apply the ultimate level of evaluation to their programs.

Swanson (1998) cited several early HRD financial studies that used the ROI approach to demonstrate the value of HRD interventions. He noted that these studies "...demonstrated that HRD imbedded in a purposeful performance improvement framework -- and systematically implemented -- yielded very high returns on investments, an ROI of eight to one or more in year or less" (p. 289). These results are indeed impressive and demonstrate the clear value of HRD interventions. Unfortunately in the financial world high returns are associated with high-risk projects (Brigham, Gapenski, & Ehrhardt, 1999), and the reporting of high ROI's reinforces the perception that investments in HRD programs are risky.

Cautions in the use of Financial Analysis Tools to Evaluate HR Programs

Early adopters of capital budgeting and financial accounting techniques to evaluate human resource programs were sharply criticized by Hunter, Schmidt, and Coggin (1988) who claimed in their view that "...many of these methods are often conceptually and logically inappropriate" (p. 522). Their skepticism and concern were driven primarily by the definition of utility and the translation of that concept to a financial analysis. Boudreau's (1983) early work on utility analysis presented one of the first applications for the use of capital budgeting as applied to such traditional human resource functions as selection and training. Boudreau believed that utility figures should be discounted, and adjusted for variable costs and the taxation effect. This resulted in a definition of utility as contribution to after-tax profits. While this early work broke critical ground in valuing human resource investments in a financial context, it is difficult to apply a single utility model to every situation. While Hunter, Schmidt and Coggin (1988) were critical of the utility model and the application to HR investment decisions, they were later challenged by Cronshaw and Alexander (1991) who argued that capital budgeting theory can be a useful framework for demonstrating the utility of human resource programs. Cronshaw and Alexander encouraged practitioners to use the utility analysis models and supported the use of capital budgeting techniques that rank investment alternatives. They supported providing capital budgeting analysis of HR programs to organizational decision makers as a means of identifying relevant investment decisions. This debate is central to the issue of whether financial measurement techniques are appropriate in the measurement of human resources.

Parsons (1997) lists the benefits and limitations of using financial analysis tools to evaluate human resource development programs. Her list of advantages follows:

1. The tools help HRD practitioners analyze programs through customers' eyes and ask strategic questions.
2. These tools guide practitioners in talking with other stakeholders about their programs.
3. HRD financial analysis tools provide a rationale way of making decisions.

While the application of financial models may provide some comfort in being able to demonstrate value in dollar terms, the measures are often misapplied. Parsons (1997) recognizes this factor in identifying the limitations of using financial models:

1. These tools are unidimensional, only capturing aspects of performance that can be financially translated.
2. HRD financial analysis tools have difficulty measuring aspects of performance where the feedback between action and effect is not immediate or direct.
3. The analysis is only as useful as the information and values on which it is based.

Her third point is true of most any analysis, although the values associated with people may understandably be more of a factor than the values of a capital asset. The result of using financial analysis for a human resource intervention is often a cost benefit analysis where the responsibility for justifying the assumptions falls back to the human resource managers to defend. This propose - defend trap is a sure way to frustrate the human resource professional and the line managers. The key is in demonstrating the value of investments in capabilities in a way that the line managers can understand and believe.

Drew (1996) notes that "...direct transfer of financial models to management of knowledge is limited in scope, presents conceptual difficulties, and if implemented could result in poor quality, over-simplified decision-making" (p. 13). Boudreau & Ramstad (1997) expound on the danger of simply applying financial accounting measures to human resources. They remind us that accounting systems were developed over 500 years ago to be used as an internal management control device. Applied to HR this is the activity monitoring function that provides insight on the efficiency of HR by measuring cost per hire or turnover rates, but does not provide insight into the impact that HR practices have on the competitive positioning of an organization.

An Alternative ROI Approach

Peter Ramstad at Personnel Decisions International (PDI), introduced a concept called threshold ROI (Provo & Neumann, 1998, Ramstad, 1998). Rather than scramble to develop the financial projections that are required to calculate the ROI, PDI's Return On People™ approach presents an alternative process. This method may provide a better approach for human resource professionals for a number of reasons. First and foremost, the presentation of a definitive ROI percentage is discouraged. As mentioned above high ROI's are associated with high levels of risk. Investments in human resources are typically small relative to the benefits received and the reported ROI's do little more than signal management that the investment is risky.

Second, the line managers are involved and asked to quantify what an increase in performance is worth to them. This process has been demonstrated to work even for highly skilled jobs where output has been difficult to measure. The following example illustrates how this would happen for a particular client case.

Case Example

The XYZ Corporation designs software products. XYZ determined that its ability to sell and build products was a key source of competitive advantage. Design capabilities were the single biggest factor keeping XYZ from meeting its strategic goals. The HR management team wanted to identify the best HR investments for the coming year and to quantify the impact of increasing software designers' capabilities. The following process demonstrates the threshold ROI approach for estimating the dollar value, or *impact*, of increasing design capabilities.

Step 1: People who knew the job well ranked the current software designers in order of job performance.

Step 2: The experts were then asked to think about the differences in performance between people who were in the 75th percentile vs. the 25th percentile. The brainstormed differences were:

- Designs better solutions,
- Reaches a higher percentage of milestones on time,
- Identifies synergies with other products, and
- Provides more accurate cost estimates.

Step 3: The experts were then asked to quantify the value of these performance differences. Since there was naturally a bit of disagreement around the exact value, agreement was obtained on the minimum value of the differences by using the lowest numbers that were proposed.

Step 4: The values assigned to these performance differences were summed, providing a total value of $80,000. Dividing $80,000 by 1.3 (the number of standard deviations represented by the difference between the top and bottom 25% of performers) resulted in an estimate of $61,500 as the dollar value of changing the performance of the software designers by one standard deviation.

A Strategic HR Measurement Approach

"The key to financial accounting is the consistent application of accounting rules producing comparable information across organizations" (Boudreau & Ramstad, 1997, p. 350). Given this rationale it is a short leap to supporting the notion that HR measurement could be used much the same way where certain HR practices could be evaluated across organizations or even across divisions in a decentralized organization. Human resource managers need a set of measures that appropriately account for the return on their assets, people. Boudreau and Ramstad (1997) use the differentiation between accounting and finance to differentiate between the professional and strategic applications of HR measures.

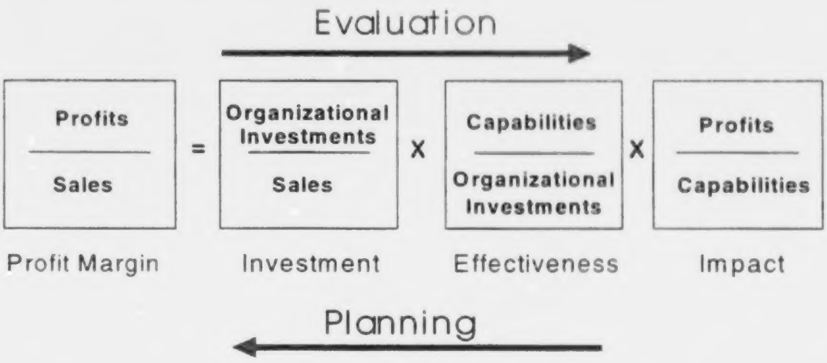
> HR measurement systems should focus beyond simple descriptions of past activities, similar to traditional accounting. They should not be satisfied with measurement systems that merely satisfy regulatory requirements. Instead, HR measurement should adopt a predictive perspective, similar to finance. (p. 351)

Boudreau & Ramstad (1997) are also clear in their recommendations for applying lessons learned from financial history to the strategic role of human resources. They note that it is critical to establish linkages between business needs and HR processes and to understand constraint analysis as a way of developing appropriate and useful measurement systems. Specifically they recommend that HR professionals:

- *Build on the value chain.* One way for HR to be a "business partner" is for HR managers and their constituents to truly understand the value chain and what it reveals about key constraints.
- *Search for constraints.* For HR measures to create change, they must identify and alleviate critical constraints.
- *Use data models even if the data are imperfect.* Both financial measurement and marketing measurement do not require perfectly objective information. In fact, their evolution shows that they began with very imperfect data, but with very coherent models of the value linkage. (pp. 352-353)

Figure 1 shows the Return On People™ Model. This approach provides the business case context needed to enhance the role of human resource professionals as strategic partners. The model demonstrates that planning should be initiated by considering the impact that additional capabilities can bring to the organization in the form of increased profits. Effectiveness is measured by how well the investments contribute to increased capabilities. This approach provides a context for making a decision on what to invest in those capabilities.

Figure 1: Return On People™ Model



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Summary

It is difficult to participate as a strategic business partner without demonstrating the value that is generated through investments in the assets you manage. The challenge for HR professionals is to demonstrate the value of investments in an asset, people, which has long been thought to be immeasurable. Measurement of human capital investments needs to consider effectiveness, efficiency, and impact. Unfortunately most HR measurement systems are focused on measuring efficiency alone.

Human resource professionals should be cautioned against the application of financial accounting techniques to evaluate their initiatives. Financial techniques were developed to ensure maximum returns on capital, which for decades has been considered the scarcest resource in an organization. Today the scarcest resource is human capital and measurement systems that optimize capital and not people will result in the misapplication of resources. This paper suggests a variant on the traditional financial techniques and incorporates the strategic positioning of HRD initiatives. Application of human capital strategies and measurement tools that appropriately leverage the constrained resource have the ability to provide greatest impact on the organization.

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Measures and Indicators of Intangible Assets for Research Institutes and Colleges: A Literature Review

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Until recently, little attention has been given by HRD to intellectual capital (also known as intangible assets), primarily because of the difficulty of measurement. This paper explores several definitions, measures, and indicators of intangible assets. A model is provided as a basis for customization by research institutes and colleges.

Keywords: Human Capital, Intangible Assets, Financial Returns

The discussion of intellectual capital (also referred to as intangible assets) appears to go back to Becker (1962) who initiated human capital theory. Capital usually refers to financial capital, but Becker categorized both school-based education and on-the-job training as human capital investment, both of which are expected to increase future real earnings over a lifetime. School-based education is considered general human capital investment and is expected to increase productivity irrespective of the specific job or occupation the person pursues. On-the-job training is specific human capital investment and is generally not applicable to other firms, leading to minimal transferability.

Research shows that investment in intangible assets is important because: a) technology, work systems, and organization (all influenced by intangible assets) may determine the competitive edge for the organization; b) the pillar of economic structures is being transformed from a skill-based manufacturing industry into high technology and service industries, which emphasize innovation, work systems, and information; and c) flexible production systems require such assets. It is regrettable that managers and investors often neglect intellectual inputs and outputs, though these may well outweigh the importance of physical assets. In fact, research provides some evidence that intangible assets account for the difference between stock market value and net book value. Firms in information technology, or the so-called high-tech industries, like Microsoft or Intel, have a high ratio of intangible assets to market assets. According to research reported by Sveiby (1997), many electronics companies, like Hewlett-Packard, had a fairly low proportion of intangible assets to market value, compared with those of media companies, waste management companies, and many other branded consumer product companies, like Coca-Cola, which had high proportions.

There are many types of research on the measurement of the impacts of human capital, HRD programs, or HR practices. Medoff and Abraham (cited in Strober, 1990) used performance ratings by immediate supervisors as the measure of productivity and examined data on education, experience, productivity, and earnings for about 7,600 white, male, full-time managers and professional employees in two U. S. manufacturing firms. Their findings showed a positive correlation between experience and earnings, although the relationships between experience and productivity were zero or negative. Bartel (1995) showed positive relationships between training and job performance, using a company database. Bassi and Van Buren's (1998) research revealed a possible link between organizational investments in human capital and organizational measures of performance, including market-to-book value, by utilizing a national cross-industry survey of over 500 organizations. The research, while not conclusive, suggests that training, by itself, in one year may enhance a company's market-to-book value the next year.

Using a laboratory study with students participating in a business simulation game, Dermer and Siegel (1974) found no significant or systematic relationship between any of the four behavioral variables: motivation, effort, group cohesion, and satisfaction, and performance measured by sales, earnings, return on investment, and stock price. However, if valid relationships and reliable bases can be established upon which accountants can base measurements, such measures can be utilized to complement traditional accounting information. Paperman (1976) examined the effect of human resource accounting measures on investment decisions and attitudes regarding measurement of human resources, using CPA subjects in a laboratory experiment composed of two simulated

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investment decision cases. The research results indicated a change in investment decisions when information on human resources measures was added to earnings per share trends.

It has been suggested that HR management practices constitute a core competency of organizations in the long run and affect organizational performance. As a result, there have been efforts to examine the relationship between human resource management practices and firm performance. Research by Huselid, Jackson, and Schuler (1997) and Becker and Gerhart (1996) empirically shows that task rotation, small circle activities, autonomous work teams, functional teams, performance-based pay systems, education and training, and management participation, all of which are designed to increase intangible assets or enhance the sharing of intangible assets and information among employees, exert a positive influence on firm performance.

These studies, however, provide little pragmatic guidance to HRD managers about ways to measure assets related to intangible or invisible assets. Therefore, the following research questions are suggested in order to guide practical decisions made by HRD managers.

Research Questions

While there are many definitions of intangible assets, there has been no consensus. The major questions to be answered by this research were: "What are the dimensions of intangible assets for organizations, especially for research institutes and colleges?" "How are intangible assets measured in organizations, especially for research institutions and colleges?" and "What are the indicators for intangible assets for research institutes and colleges?"

To pursue these research questions, generic definitions and classifications of intangible assets are reviewed, and then proper dimensions of intangible assets for research institutes are suggested. Similarly, the measures of intangible assets categorized by different scholars are examined, and then a set of measures of intangible assets proper for research institutes is developed. Finally, a list of indicators of intangible assets for research institutes is suggested in order to develop and manage intangible assets of research institutes and colleges. Research institutes and colleges are the focus of this research because of the affiliation of the authors of this paper.

Definition of Intangible Assets

A number of scholars have defined intangible assets or intellectual capital. For instance, Lowendahl (1997) and Haanes and Lowendahl (1997) defined intangible assets for the strategic management of professional service firms. According to them, intangible assets are categorized into intelligible resources, intelligible assets, capabilities, and competence. Stewart (1997) classified intellectual capital into human capital, structural capital, and customer capital. Human capital includes "the capabilities of the individuals required to provide solutions to customers" (p. 76). Human capital is an important resource because it is the driving force of innovation and renewal. Structural capital consists of internal structure and external structure. Internal structure is generated by employees and owned by the organization. The components of internal structure include patents, concepts, models, computer and administrative systems, corporate culture, and mentality. External structure includes the relationship between customers and suppliers, such as brand names, trademarks, corporate reputation, and images. Customer capital indicates "the value of an organization's relationships with the people with whom it does business" (p. 77). Customer capital includes repeat customers and brand value. Similarly, Edvinsson and Malone (1997) also defined intellectual capital as human, structural, and customer capital. All individual capabilities, including the knowledge, skills, and experiences of the firm's employees and managers, are included under the category of human capital. Structural capital is defined as the embodiment, empowerment, and supportive infrastructure of human capital, as well as organizational capability, including the physical systems used to transmit and store intellectual material. Customer capital includes the relationship of a company to its customers, critical to the company's value.

According to Brooking (1997), the intellectual capital of an enterprise can be split into market assets, intellectual property assets, human-centered assets, and infrastructure assets. Market assets are "the potential an organization has due to market-related intangibles" (p. 13). These comprise various brands, customers and their loyalty, repeat business, backlog, distribution channels, various contracts and agreements, such as licensing, franchises, and so on. Intellectual property represents the legal mechanism for protecting many corporate assets. Examples include know-how, trade secrets, copyrights, patents, and a variety of design rights. Human-centered assets include the collective expertise, creative and problem solving capabilities, leadership, entrepreneurial and managerial skills embodied by employees, and psychometric data and indicators of how individuals may perform in given situations. Infrastructure assets are defined as those technologies, methodologies, and processes that make the organization able to function. Examples comprise corporate culture, financial structure, databases of information on the market or customers, and communication systems, such as e-mail and teleconferencing systems.

According to Sveiby (1997), the invisible assets of an organization's balance sheet can be classified as a family of three components: employee competence, internal structure, and external structure. Employee competence involves the capacity to act in a wide variety of organizational settings to create both tangible and intangible assets. The internal structure includes patents, concepts, models, and computer and administrative systems, as well as the organizational culture or spirit. The external structure refers to relationships with customers and suppliers, in addition to brand names, trademarks, and the company's reputation or image.

Hall (1991) categorized intangible resources into assets and skills, using the criterion of belongingness. The scope of intangible resources which may be classified as assets includes the intellectual property rights of patents, trademarks, copyrights, and registered designs, as well as contracts, trade secrets, the reputation of product and company, and databases. Skills, or competencies, include public knowledge (such as scientific works, the people-dependent or subjective resources of know-how of employees, suppliers and distributors), networks, and organizational culture. Reputation can be categorized as an asset because of its belongingness feature.

Intangible resources may also be classified as follows (Hall, 1991). The *having* capabilities represented by intangible assets are patents, while the *doing* capabilities represented by skills and competencies are know-how. Reputation is people dependent, while databases are people independent intangibles. Trademarks are protected in law, while organizational networks are not protected in law. Among intangible assets, trademarks, patents, copyrights, registered designs, contracts, trade secrets, and databases are legally protectable, while information in the public domain, reputation of product and company, and organizational and personal networks are not legally protectable. Intangible resources, the competencies or doing capabilities, are classified into functional skills or cultural capabilities. Functional skills include employee know-how, supplier know-how, distributor know-how, and servicers' know-how, such as advertising agencies, while cultural capabilities comprise perception of quality standards, perception of customer service, ability to manage change, ability to innovate, and team working ability.

Weston Anson, an MBA and lawyer who runs a company called Trademark & Licensing Associates, Inc, in California, categorized intangible assets into three groups:

> (1) a technical bundle (trade secrets, formulas, proprietary test results, etc.); (2) a marketing bundle (copyrights, corporate name and logo, warranties, advertising, package designs and copyrights, trademark registrations, etc.): and (3) a skills and knowledge bundle (databases, manuals, quality control standards, asset management processes, security systems, business licenses, noncompete clauses; proprietary management systems, etc.). (cited in Stewart, 1997, pp. 235-236)

A simple, yet measurable and useful definition of intellectual capital is proposed by Ulrich (1998) as follows: intellectual capital = competence * commitment. This equation indicates that intellectual capital requires both competence and commitment. A low score on either competence or commitment significantly reduces overall intellectual capital, because the equation multiplies rather than adds. Firms with high competence but low commitment have talented employees who can not get things done. Firms with high commitment but low competence have less talented employees who get things done quickly.

Scholars differ on definitions of intangible assets, though some components are similar. Table 1 shows that Stewart's (1997) definition of intangible assets is similar to that of Edvinsson and Malone (1997). The human capital component of Stewart (1997) is similar to the human-centered asset concept of Brooking (1997), while the internal structural capital of Stewart (1997) is a comprehensive concept to which both the intellectual property assets and infrastructure assets of Brooking (1997) belong. The external structural capital of Stewart (1997) is similar to the market assets concept of Brooking (1997) and Anson (cited in Stewart, 1997).

Table 1
Definitions of Intangible Assets

Stewart (1997)	Edvinsson & Malone (1997)	Brooking (1997)	Sveiby (1997)	Hall (1991)	Ansen (cited in Stewart, 1997).
1.Human capital 2.Structural capital -internal -external 3.Customer capital	1.Human capital 2.Structural capital -internal -external 3.Customer capital	1.Market assets 2.Intellectual property assets 3.Human-centered assets 4.Infrastructure assets	1.Employee competence 2.Internal structure 3.External structure	1. Assets 2. Skills = competence	1.Technical bundle 2.Skills/knowledge 3.Marketing bundle

For the definition and classification of intangible assets for research institutes, the definition of Brooking (1997) was followed in that it reflects to a large extent the human resources, research functions, and infrastructure of research institutes. That is, intangible assets of research institutes are classified into market assets, intellectual assets, human-centered assets and infrastructure assets.

Measurement of Intangible Assets

The measurement of human assets is a critical function in enhancing human resource development in organizations although it has been questioned in several aspects (Sackman, Flamholtz, & Bullen, 1989). First, critics argue against mathematically computing the cost and value of human resources as assets for internal management or external corporate financial statements because, they argue, it diminishes their humanity and treats them as objects. However, proponents of measuring human resources hold that what is being measured is not human resources, per se, but the investment in human resources or the services that human resources are expected to provide. Thus, such measurement does not reduce people to things but, rather, reflects value to the resources. Second, there are arguments regarding specific training as a necessary but not sufficient condition for the existence of human assets. Third, the uncertainty of human resource measures and the potential for manipulation of earnings exist not only if we capitalize investments in human resources, but also if we fail to capitalize them. Fourth, measurement of human resources is difficult.

There are two major goals for measuring intangible assets and two main interest groups involved (Sveiby, 1997). For external purposes, the organization needs to describe itself as accurately as possible to stakeholders, customers, creditors, and shareholders so they can assess the quality of its management. For internal purposes, management needs to know as much as possible about the company so it can monitor its employees, processes, structures, and capital. In other words, measurement of intangible assets plays an important role in a management information system. This again raises the question, should the value of intangible assets at a particular time be measured or should the attempt be to get a feeling for changes and flows? The parallel to this question in financial resources is a comparison of a balance sheet with a profit and loss statement. Change is the important question when managers are most interested in flows and trends. In this situation, they are more concerned with the speed with which intangible assets are measured than with accuracy.

Buhner (1997) suggested three major reasons why traditional financial and accounting indicators are not appropriate measures for human resources. First, employees are often regarded as costly liabilities rather than as valuable assets, while tangible assets, such as machinery or buildings, are treated as investments. Second, traditional financial measures, such as return on investment or earnings per share, are subject to arbitrary management decisions, so a company may appear successful in the short term but will not deliver long-term profitability. Third, traditional accounting data do not provide real-time feedback for continuous improvement or preventive action programs.

Based on human resource accounting theories and models, many firms and government agencies are engaged in developing indicators of human resources. For example, Stewart (1997) classified intellectual capital into human capital, structural capital, and customer capital and then presented tools for measuring and managing intellectual capital as follows. The simplest measure of intellectual capital is the difference between its market value and its book equity. In this context, market value equals price per share multiplied by the total number of shares outstanding. Tobin's Q, developed by Nobel prize winning economist James Tobin, compares the market value of an asset with its replacement cost. This indicator was originally designed to predict corporate investment decisions independent of macroeconomic factors, such as interest rates. However, it can be a good measure of intellectual capital, as suggested by Federal Research Chairman, Alan Greenspan, who noted that high Tobin's Q and market-to-book ratios reflect the value of investments in technology and human capital.

Human capital measures include innovation, employee attitudes, tenure, turnover, experience, learning, and the knowledge bank. Innovation is measured by the percentage of sales attributable to new products or services. A measure of gross margin from new products is another measure. Some research shows a strong relationship between employee attitudes and customer attitudes, providing evidence of the interplay between human and customer capital. Correlational studies between morale and financial performance show a positive relationship. Another approach to measuring human capital is to maintain indexes of human resource inventories. These indexes include the average number of years of experience employees have in their professions, turnover among experts, seniority among experts, value-added per expert and per employee, the percentage of customers who are competence-enhancing, and rookie ratio, the percentage of employees with less than two years' experience.

Structural capital measures consist of measures of the values of accumulated stocks of corporate knowledge and measures of organizational efficiency, i.e., of the degree to which the company's systems augment and enhance the work of its people rather than obstruct them. In order to measure corporate knowledge, the first job is to look at an intangible asset's uniqueness, breadth of use, incremental profit margins, legal status, life expectancy, and so on. Then, the relative strength of the asset is measured by comparing the organization's assets with comparables. As a measure of operating efficiency, working capital turnover, i.e., the number of times each year that working capital cycles through a company, is suggested. This measure was devised by George Stalk of the Boston Consulting Group and used by Allied-Signal, GE, and others. Some customer capital measures are customer satisfaction and the net present value of the customer base. Customer satisfaction should satisfy the link between increased customer satisfaction and improved financial results. Happy customers are featured by loyalty (retention rates), increased business (share-of-wallet), and insusceptibility to a rival's price tolerance. To calculate how much a customer is worth, four steps are suggested: first, decide on a meaningful period of time over which to do the calculations; second, calculate the profit customers typically generate each year; third, chart customer life expectancy, using samples to determine annual erosion of the customer base;.fourth, calculate the net present value of a customer.

Brooking (1997) categorized intellectual capital into market assets, intellectual property assets, human-centered assets, and infrastructure assets. Methods for measuring market assets comprise customer survey, customer interviews, analysis of sales data, analysis of cost of sales, market research, audit of agreements, competitive analysis, evaluation of ROI, and analysis of payments. Methods for evaluating intellectual property assets include survey for market pull, competitor analysis, ROI, audit of agreements, ROI on legal fees, survey for know-how, and analysis of payments. Methods for evaluating human-centered assets are interview, test and assessment, knowledge elicitation, self-assessment, manager assessment, peer review, and track record assessment. A portfolio of knowledge measures is suggested in Drake (1997) to include economic, strategic, user-based, and outcome measures. Economic measures comprise replacement value, external market value, and internal time/money allocations. User-based measures consist of insight creation, sense-making, uncertainty reduction, and assurance increase. Strategic measures include maintenance, depreciation, replenishment, and anticipatory measures. Outcome measures include patents, new products, customer retention, and innovative practices.

Measuring intellectual capital is a multidisciplinary task. Developing a variety of measurements for a particular organization requires energy and time, so it is suggested that HRD managers look for similar measures and test whether they fit the organization. Customized measures are most desirable. Stewart (1997) suggested three principles to guide a company in choosing what to measure: first, keep it simple--choose no more than three measurements each of human, structural, and customer capital, plus one number that gives you a whole picture; second, measure what's strategically important; and third, measure activities that produce intellectual wealth.

Following Stewart's (1997) advice and Brooking's (1997) definition of intangible assets, dimensions of intangible assets for research institutes are suggested as follows. The measures of market assets for research institutes may include name values of a particular research institute; customers and their loyalty; continuous research and business; channels for printing, publication, and distribution; types of research; and so on. The measures of intellectual assets may consist of know-how, copyrights, patents, models, design rights, and trade secrets. Measures of human-centered assets may include academic degrees, experience, leadership, creativity, problem solving ability, self-development efforts, on-going research, entrepreneurial spirit, and management techniques, networks, work attitudes, turnover, and tenure. Finally, the measures of infrastructure assets may include financial structure, computer systems, including both hardware and software, communication system, information-sharing corporate culture, financial structure, and databases of information on the market or customers.

Indicators of Intangible Assets

The indicators of intangible assets for research institutes and colleges have rarely been implemented in organizations. Grojer and Johansson (cited in Sveiby, 1997) reported that few attempts to convert people and competencies into dollars have proved useful for managers, although they are theoretically interesting. Celemi, a Swedish company, was the first company which made an assessment of the performance of intangible assets based on the data that the firm provided (Sveiby, 1997). Celemi's "invisible" balance sheet classified intangible assets into external structure, internal structure, and competence according to its knowledge-focused strategy. Each category of external customers, internal structure, and competence had measures of growth/renewal, efficiency, and stability. In fact, the choice of indicators was dependent on the firm's knowledge-focused strategy. The following is an example of indicators for intangible assets used by Celemi.

Table 2

Intangible Assets of Celemi Company, Sweden. (Source: Company Annual Report, 1995) (from Sveiby, 1997)

External Customers	Internal Structure	Competence
Growth/renewal Revenue growth Image-enhancing customers	Growth/renewal IT investment % value added Organization-enhancing customers Product R&D % value added Total investment in org. % value added	Growth/renewal Avg. professional experience Competence-enhancing customers Total competence, experts Average education level
Efficiency Change in sales per customer	Efficiency Change proportion of admin. Staff Sales per admin. staff growth	Efficiency Value added per expert Value added per employee
Stability Repeat orders Five largest customers, %	Stability Admin. Staff turnover Admin. Staff seniority, years Rookie ratio	Stability Expert turnover Expert seniority, years Median age all employees, years

Edvinsson and Malone (1997) reported the following indicators based on Skandia's early intangible capital annual reporting. For the infrastructure, PCs/employee (#), administrative expense/employee ($), IT expense/employee ($), IT staff/total staff (%), IT literacy of employees (#), and others were listed. The renewal and development indices included share of training hours (%), training expense/employee ($), share of employees under age 40 (%), R & D resources/total resources (%), and satisfied employee index (#), among others. Leadership index (%); motivation index (%); empowerment index (#); number of employees/number of employees in alliances (%); full-time permanent employees as percentage of total employment; per capita annual cost of training, communication, and support programs for full-time permanent employees; and average years of service with company (#); were some of the indicators belonging to Skandia's human focus factors. The indicators for customer focus included satisfied customer index (%), number of contracts (#), and customer IT literacy (%). A list of tentative measurements for a hypothetical organization includes number of company patents (#), average age of company patents (#), patents pending (#), employees based at partners' facilities (#), and partners' employees based at company's facilities (#), out of over 60 listed.

To pave the way for developing indicators of intangible assets for research institutes and colleges, some plausible indicators are suggested in Table 3 based on the dimensions of intangible assets as follows, although it is suggested that each research institute or college needs to develop its own indicators, reflecting on its vision and strategies.

Contributions to HRD

Even though HRD managers may recognize the importance of intangible assets and their impact, few appear to know how to integrate intangible assets and their measurement with human resource development. This research, then, is important in examining and comparing ways of measuring intangible or intellectual assets. Different definitions of intangible assets may provide HRD managers with a new perspective of the knowledge organization in order to assist in developing new assets for their organization. Second, as Brooking (1997) pointed out, measurement of intellectual capital enables managers to understand where value lies in the company and provides a metric for assessing success and growth in those assets. Further, as suggested by Flamholtz (1985), measurement of human resources has the potential of leading to a reconceptualization of managing and developing human resources in organizations. In addition, the research provides HRD managers in research institutes and colleges with detailed and concrete information of their intangible assets and demonstrate that the role the model could play in measuring and ultimately developing their intangible assets. "knowledge economy." Sveiby (1997) suggested that a knowledge-focused strategy will earn increasing returns from intangible assets, assets that convert invisible revenues into tangible revenues. Finally, the indicators developed research institutes and colleges will provide a baseline with which a research institute or college can develop a customized set to fit their particular vision, strategy, and culture.

Table 3
Possible Measures and Indicators of Intangible Assets for Research Institutes and Colleges

Category	Measures	Indicators
Market assets	Name values of a research institute or colleges Customers and their loyalty Continuous research and business Channels for printing, publication, and distribution, types	Rankings among similar institutes or colleges, # of publications # of contracts, total funds, funds/employee ($) weight of big 5 customers, satisfied customer index (%) # of continuous research over 2-3 years # of publications distributed # of organizations/persons listed as consumers
Intellectual property assets	Know-how Copyrights Patents Models Design rights Trade secrets	Value added per employee R & D cost per employee # of outside advisors # of copyrights # of patents, average age of patent, patents pending (#) # of models # of design rights # of trade secrets
Human-centered assets	Academic degrees Experience Leadership Creativity Problem solving ability Self-development efforts On-going research Entrepreneurial spirit Management techniques Networks Employee attitudes Turnover intra-organizational knowledge	# of Ph.D's, % of Ph.D of different nationality, average education level Years of research profession Leadership index (%) Creativity index (%) Problem solving index (%) # of self development plans training expense/employee ($) # of presentations, seminars and workshops, # of working papers Share of employees under age 40 (%) # of management techniques # of employees/# of employees in alliances (%) Motivation index Satisfied employee index (#) Turnover rate Years of service with the organization
Infrastructure assets	Financial structure Computer systems, including both hardware and software Communication system Information-sharing corporate culture Databases of information on the market or customers	Administrative expense/employee costs($) IT expense/administrative expense (%) Computerized financial structure Performance-based pay IT staff/total staff (%) IT literacy of employees (#) Utilization rate of intranet # of information-sharing workshops, seminars Per capita annual cost of communication and support programs for full-time permanent employees Utilization rate of intranet List of customers

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The Corporate Curriculum: A Working-Learning Environment

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Organizations that offer a powerful learning environment to their employees, tend to be more innovative and to provide better quality than those that do so to a lesser extent. This hypothesis has been explored and tested in a large number of institutions of public Health and Welfare in the Netherlands. The research project described provided promising data to support the theory tested. Furthermore the project led to the construction of a diagnostic instrument for organizations to analyze their own work environment as for its quality as a learning environment.

Key words: Knowledge productivity, Corporate curriculum, Learning

The paper focuses on the development of a corporate curriculum: a plan for learning in service organizations, health care, business and industry in the context of a knowledge economy. Partly it provides a theoretical framework; partly it presents a report of the second phase of a three-phase research project conducted in the Netherlands in 42 institutions for Public Health and Welfare.

The following aspects will be addressed:

a. The impact of a knowledge economy on learning in organizations
b. Knowledge productivity as a dominant indicator for successful performance
c. The corporate curriculum as a set of learning functions that gear toward knowledge productivity.
d. The results of research activities supporting the theory presented

The main question dealt with in this paper, is the question what elements in the working environment contribute to the learning processes needed in organizations in order to adapt to, or be ahead of developments in society.

Theoretical framework

Knowledge productivity

Nowadays challenges of increasingly fast extending information and knowledge have profound implications for the way in which organizations operate and compete. The most effective organizations are those that are capable of signaling new trends and developments, those that are able to develop new knowledge and that know how to disseminate and apply this newly developed knowledge. In doing so organizations will prove to be more capable to innovate and to provide better quality services and products. Organizations that have the ability described here, we call knowledge productive. In the design of this study, knowledge productivity was elaborated along two lines.

1. The innovative ability of an organization. (change)
2. The ability to enhance the quality of existing approaches (improvement)

The corporate curriculum

The process needed to enable both individual professionals and their organization to be knowledge productive basically consists of learning. The learning processes meant might be triggered by the environment in which the individuals operate. The work environment thus functions as a learning environment. It is this work-learning environment we refer to as the "corporate curriculum". Theories of learning provide a basis for analyzing the richness of such an environment seen from a learning perspective.

The corporate curriculum consists of all the intended and not intended conditions that affect the learning processes among the workers in organizations. In order to emphasize that the concept of the corporate curriculum

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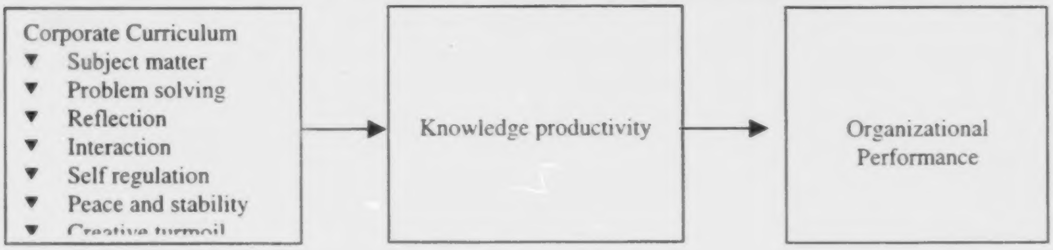
does not only include the intentionally planned elements in the work environment, we like to refer to this curriculum as something that is a mix of natural and man made conditions. The corporate curriculum should be viewed as a rich landscape in which personnel and teams find their ways and construct knowledge. An organization that tries to improve its knowledge productivity will focus on the analysis and support of the following learning functions (Kessels 1996):

1. *Subject matter expertise*: Acquiring subject matter expertise and skills directly related to the target competencies. The competencies related to acquiring subject matter expertise have been the main objective of training and development.
2. *Problem solving:* Learning to solve problems in new and ill defined problem areas by using domain specific expertise.
3. *Reflective skills and meta-cognitions*: Developing reflective skills and meta-cognitions aiming at the identification and understanding of determinants of successes or failures in learning
4. *Communication skills:* Securing communication skills that provide access to the knowledge network of others and that enrich the learning climate within a workplace.
5. *Self-regulation of motivation, emotions and affection:* Procuring skills that regulate the motivation and affections related to learning.
6. *Peace and stability:* Promoting peace and stability to enable specialization, synergy, cohesion, and integration. Peace and stability are necessary for gradual improvement.
7. *Creative turmoil:* Causing creative turmoil to instigate innovation. Creative turmoil brings the dynamics that push towards radical innovation and leaving traditional paths behind. Creative turmoil requires a certain amount of existential threat

Of the seven functions mentioned, five refer directly to distinct learning processes. Two of them refer both to conditions of learning (peace and stability and creative turmoil), ánd to the processes of learning how to control those conditions. This ambiguous nature of these functions made us decide to focus on the first five functions and leave the sixths and seventh function for the third phase of the project.

The policies, the activities, and the conditions an organization develops to promote the learning functions form its *corporate curriculum*: the plan and the conditions for learning to increase knowledge productivity. Knowledge productivity in turn is assumed to have an impact on the eventual organizational performance.



Problem statement and research questions

The theory outlined above may be summarized in the following statement, which at the same time serves as our general hypothesis:

> *The more powerful the learning environment provided by an institution, the more an institution will prove to be knowledge productive, which eventually will show in a better organizational performance.*

Phrased slightly different, this means the more elaborated, or the richer the corporate curriculum, the more knowledge productive people and work units, working in that particular environment, will prove to be. The increased knowledge productivity will become evident in better processes, better products and better services. The assumed relation is visualized in the following scheme:

Corporate curriculum
↕
Learning processes
↕
Learning results:

a. The ability to adapt to contextual changes and
b. The quality of work processes, products and services.

In order to find the evidence needed, the following four research questions were formulated:

1. To what extent are the functions of the corporate curriculum fulfilled in the investigated organizations?
2. What elements in the work environment promote these functions?
3. Is there a relation between the extent to which functions are being realized and the innovative ability the organization appears to have?
4. Is there a relation between the realization of the functions of the corporate curriculum and the quality shown in work processes, products and services rendered by the organization?

Research methodology

The project was set up as a two-phase design. A third phase, which is not yet completed, was added later. The first phase consisted of a number of case studies and study of literature to identify possible variables operating within a corporate curriculum. A number of sources of literature were analyzed in order to identify the variables that should be included in further investigations.

Five institutions were selected, that were considered rich and well elaborated cases in various sectors of Public Health and Welfare. In each of the cases interviews were held from a variety of perspectives. Interviewees were asked to describe their career and identify important learning opportunities and experiences. Furthermore they were asked to describe the information, communication and documentation arrangements in their organization. Finally they were asked to describe the history of their organization and to identify important moments of progress for the organization. Based on both the study of literature and the interviews a series of questionnaires was developed.

Then a more extensive second phase of the project followed. It is this particular part of our research on which we concentrate in this article. This phase included a survey among 82 working units in institutes for Public Health and Public Welfare. It was decided to choose work units as our focus instead of organization as a whole. This decision was made on two grounds. First of all for reasons of feasibility and reduction of complexity. That was the weak part of our choice. Secondly it was made for reasons of utility of the instruments to be developed. We felt that work units rather than organizations would be the entities that decide to do a self-analysis and to develop their own learning environment and policies. Especially in the larger organizations we identified a strong tendency towards decentralization, leaving the decisions to the units.

The perspective chosen is a learning perspective. For each of the functions of the corporate curriculum questions were constructed in order to identify to what extent the investigated learning processes actually could be identified. For each of the learning processes related to the first five functions of the corporate curriculum items were developed. The items are meant to identify whether, and if so, to what extent motivating conditions, a rich environment, room for experimenting and feedback are available and effective.
In addition to that, respondents were asked to mention conditions they experienced as either facilitating, or obstructing the processes involved (instrument 1).

Furthermore an inventory was constructed to inquire about the elements included in the work environment, that might be promoting these learning processes according to the outcomes of the first phase of the project (the elements in the work-learning environment, instrument 2). The first instrument was mainly based upon theoretical concepts of learning; the second instrument mainly upon organizational theories, enriched with the variables mentioned in the interviews held in the first phase of the research project.

Thirdly an instrument (3) was designed to investigate what innovations (within a few national policy trends) the units being studied, had implemented over the last years. A general trend in the field under analysis, is an increasing need for more client centered approaches and more tailor made provision of services. Concerning this trend respondents were asked to identify to what extent their organization has been effective in developing new strategies. The questionnaire consists of items to identify to what extent the organization has been able to signal national developments, to actually work out new strategies and to implement these new approaches. The respondents had to answer a number of questions keeping a particular innovation in mind. The questions, however are the same regardless the innovation chosen.

Based on quality indicators recognized and used in the sectors being investigated, an instrument was developed to identify the level of quality provided by the studied work units (instrument 4). In order to develop this instrument we could include a number of items of existing quality-instruments.

Finally an existing instrument was selected. This instrument measures a related concept. In this particular case an instrument was chosen that measures the four competencies of a learning organization (Sprenger, 1995). This fifth instrument was included as a means for external validation of the concepts used in the first two instruments. The concept measured in this particular instrument includes many elements of what we consider the components of knowledge productivity.

In sum, the first instrument identifies the learning processes taking place. The second instrument checks whether organizational conditions that might be influencing these processes actually may be identified. Together the first two instruments give a full picture of the corporate curriculum in operation in an investigated work unit. The third instrument indicates the innovative ability of the unit, while the fourth instrument provides an indication of the level of quality of the work processes of the unit. Together the third and the fourth instrument measure the concept of knowledge productivity. The fifth instrument is included for validation purposes.

The relation between the concepts and the instruments

corporate curriculum ➢ *instrument 1 and instrument 2*
↓
knowledge productivity ➢ *instrument 3 and instrument 4*
↓
performance

Instrument 5: external validation of the concept of a corporate curriculum with a comparable concept (the learning competencies of an organisation).

The investigated institutions, units and staff

In the first phase of the project we selected a number of cases (5). Instead of selecting them at random we deliberately decided to choose a small number of 'avant garde' organizations. We hoped to be able to see more of the dynamics of the processes we intended to study in organizations that were actively dealing with matters of learning, innovation and quality enhancement.

In the second phase, the survey phase, we chose another way of selecting work units. We tried to choose the units in such a way that they would cover:

a. the various distinguished sectors within the field of Public Health and Welfare;
b. both innovative and more conservative organizations;
c. units within large organizations as well as units of smaller organizations.

In reality we approached the intended coverage quit well, but it appeared impossible to actually choose particular organizations. To some extent we just had to accept the organizations that happened to be prepared to cooperate. 48 institutions were included in the project, each participating with two work units, making 96 units in total. Each work unit in turn participated with three workers and one head of the unit. Besides that, two persons either responsible for training or professional development, or for quality enhancement or quality management participated on behalf of the institution. This makes 10 respondents per institution.

Not every respondent appeared to have followed the instructions for filling in the questionnaires, so in the end it appeared that from the 96 units that would have been included only 82 could actually be analyzed. In total the number of respondents was 381, 271 of which are workers, while the others are either managers or people responsible for quality management or training.

Research analyses

In the first phase of the project, we did case study research. Literature searches and analyses were done, semi structured interviews were held, cases were described based on the interview data. The cases were fed back to the respondents and authorized. Furthermore the cases were analyzed both together with the respondents (in focus groups) and with groups of experts (expert groups). Within case analyses and cross case analyses were carried out.

Based on these analyses variables were identified and questionnaires were constructed.

At this point the survey among a large number of organizations started. Vast amounts of data were collected and processed. To find answers to the research questions, two kinds of analyses were conducted:

1. A principal component analysis, to check the quality of the individual items and to find out what are the most important dimensions within the concept being measured;
2. Canonical correlation analyses, in order to identify the strength and the nature of the relation between the concepts measured with the different instruments.

The following scheme shows what the different instruments contribute to finding support for the different research questions.

The relation between the research questions and the instruments

1. To what extent are the functions of the corporate curriculum fulfilled in the investigated work units?	➢ Instrument 1
2. What elements in the work environment promote these functions	➢ The correlation of the results of instrument 1 and 2
3. Is there a relation between the extent to which functions are being realized and the innovative ability work units appear to have?	➢ The correlation of the results of the instrument 1 with 3
4. Is there a relation between the realization of the functions of the corporate curriculum and the quality of work processes, products and services rendered by work unit?	➢ The correlation of the results of instrument with 4

Outcomes

The instruments used were analyzed. A few items had to be skipped. The principal component analysis showed that the instruments 1 and 2 form together a valid instrument to map the elements in the learning environment (instrument 2) and measure the power of the learning environment (instrument 1). Instrument 1 appears to measure a homogeneous factor, the power of the learning environment. The analysis revealed two contrasts. One was interpreted as a contrast between social and individual learning, the other as a contrast between the learning of subject matter and a kind of meta-learning, learning how to learn. In our view these contrasts coincided with the curriculum functions we had distinguished between, to such an extent that we felt we could stick to the original categories within our questionnaire.

In the second instrument we found also a strong first factor and furthermore confirmation of most of the distinctions we made in constructing the instrument. The components found are shown in the 6 figures included in this section of this article. Those found in the instruments 3, 4 are also shown in these figures. After analyzing the instruments separately, we concentrated on the relation between the instruments.

The study shows a very strong correlation (0.831) between the learning processes identified and the elements included in the work learning environment (figure 1). In that sense it strongly supports the findings of the first phase of the project. The second and the third relation (figure 2 and 3) we have not yet been able to interpret satisfactory.

Figure1.

Functions	r = 0.831 p = 0.001 ↔	Elements
Subject matter		**selection, induction**
Problem solving		**mobility**
Reflection		**training & development**
Interaction		**self directed learning**
Self-regulation		**external orientation**
		Communication
		inter/supervision
		shared policies
		quality & organization

Figure2.

Functions	r = 0.42 p = 0.001 ↔	Elements
Subject matter		**selection, induction**
Problem solving		**mobility**
Reflection		training and development
Interaction		**self directed learning**
Self-regulation		external orientation
		Communication
		inter/supervision

Figure 3.

Functions	r = 0.339 p = 0.001 ↔	Elements
Subject matter		selection, induction
Problem solving		mobility
Reflection		training and development
Interaction		self directed learning
Self-regulation		external orientation
		communication
		inter/supervision
		shared policies
		quality & organization

* *Variables printed in bold show the strongest relation*

The corporate curriculum appears to contribute significantly to the ability of organizations to change (figure 4). Especially the functions of reflection, communicative skills and social skills appear to contribute to the effect. The other functions also show a significant correlation with the ability to change.

Figure4.

Functions	r = 0.368 p = 0.001 ↔	Innovative ability
Subject matter		**ability to innovate the organization**
Problem solving		
Reflection		
Interaction		**ability to innovate one's own work**
Self-regulation		

* *Variables printed in bold show the strongest relation*

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The realization of the different functions of the corporate curriculum significantly correlates with the ability of work units to provide quality. Only the function of social and communicative skills does not appear to correlate significantly (figure 5).

Figure5.

Functions

r = 0.409
p = 0,001
↔

Quality

Subject matter
Problem solving
Reflection
Interaction
Self-regulation

improvement
innovation

* *Variables printed in bold show the strongest relation*

The outcomes of the first instrument strongly correlate with the outcomes of the fifth instrument which was included in order to validate the first instrument by comparing its results with the results of a similar instrument (figure 6).

Figure 6.

Functions

r = 0.65
p = 0,001
↔

Learning competencies

Subject matter
Problem solving
Reflection
Interaction
Self-regulation

absorption
diffusion
generation
exploitation

**Variables printed in bold show the strongest relation*

The developed instrument offers more possibilities to differentiate between the different functions of the corporate curriculum than the fifth instrument. The fifth instrument measures a more homogeneous factor.
A diagnostic instrument was developed out of the two first instruments. It includes both the learning processes and the elements in the work learning environment that may contribute to these processes. The instrument measures a coherent factor, the power of the work learning environment (the corporate curriculum). In addition to that, the instrument makes it possible to differentiate to some extent between the distinguished functions of the corporate curriculum.

The diagnostic instrument shows to those who apply it, what elements are included in the work environment or what are not included. It provides work units with a basis for discussing directions in which to go in order to strengthen or enrich the work/learning environment.
Finally a first tentative overview over the investigated sectors of health care and social welfare could be given.

Conclusions

Empirical evidence was found to support the used theoretical concepts.

A positive relation could be identified between the corporate curriculum and the ability of organizations to change. Especially reflection contributes to that. Reflection often suffers from a lack of time. Yet it shows that reflection is no luxury. Time used for reflection is said to pay itself back in terms of a growing ability to adapt to the changing contexts organizations are facing.

The more powerful the corporate curriculum, the better organizations will be able to develop quality of processes, products and services. By paying attention to the learning environment, an organization improves its

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potential to innovate and improve its work.

Instruments were developed

The instruments used make it possible to measure the power of the learning environment (the corporate curriculum). As compared to the instrument available (the fifth instrument) to measure the four competencies of the learning organization, it gives a more differentiated picture of the analyzed situation. From the instruments used, a diagnostic instrument was derived to be applied in organizations for purposes of organization development.

Some conclusions may be drawn concerning the state of affairs in this field of work (health and welfare)

Most respondents feel that their work situation to a high extent may be considered a learning environment. Reflection is the function most often mentioned as suffering from lack of time. Still this is the function that appeared to be the most crucial for raising the ability to change and important for the ability to improve the work.

The responses show that among the participants learning still is associated with being taught. They attribute more learning effects to the more traditional ways of being taught (courses) and less to more implicit learning situations like cross organizational cooperation, or participation in research activities. This may very well be the consequence of their implicit definitions and beliefs about learning and being taught

Discussion

The data collected and analyzed in this project strengthened the empirical basis of the theory presented in beginning of this paper. Still we have to realize that the data being presented involve perceptions of facts; not facts. The learning processes people claim to have experienced appear to have a strong correlation with the way they claim the work is organized and the quality and changes they say it produces. The questions asked have been put in such a way that they were factual rather than judgmental. Still we must realize we found relations between perceptions. There definitely is a need for further research to try to replace some of the perceptions by actual facts. The challenge will be to prove the relationship between actual learning results (acquired in the working situation and brought about by that very environment) and the actual level of quality and of ability to change organizations show. An important step forward has been put. Still there is a need for harder evidence.

The concepts of corporate curriculum, of knowledge productivity and of organizational performance are interrelated and each show a certain complexity, which makes it difficult to avoid the pitfalls of tautology. We tried to keep the concepts distinct but yet we feel we have to stay alert in order to avoid the risk mentioned.

The data did not suffice to reach firm conclusions about the state of affairs in Health and Welfare. Here again further systematic work is needed to build up a database about institutions for each relevant sub sector in the field. That way, organizations will be able to use this base as a reference to compare themselves with.

Perspective

Already initiatives were taken to start a third phase of the project including

a. Pilot projects to explore the practical applicability the instrument and the guidance it provides to those who use it. The group of consultants participating in the pilot projects meet regularly in order to share and discuss their experiences and translate them into plans for further action.

b. Further dissemination of the concept of knowledge productivity to extend the number of work units involved. That way more units may be observed, in order to build up an empirical data base, both to strengthen the theory and to develop a set of standards for comparison per sector. After the completion of the second phase of the project at least 30 units could be added to the built up databases.

c. Further explorations focussing on issues of peace and stability on one side and creative turmoil on the other. Here the assumed relation to be investigated is that the creative turmoil will be operating mainly in favor of the ability to bring about radical changes, while peace and stability may show a stronger relation with the ability to improve already established work procedures.

d. Attempts to get more firm evidence of actually increase organizational performance. The operationalization of that performance still is one of the major issues in this third phase op our project.

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Cross-Organizational vs. Localized Participation: A Case Study on Workplace Diversity Dialogues Implementation

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Dialogue encourages self-reflective conversation and inquiry that breaks through tension and conflict created by difference. Some organizations are exploring dialogue as one initiative in their diversity programming efforts. This case study of diversity dialogues implementation provides a comparison between one group of dialogue participants drawn from across the organization and a second group drawn from one particular organizational component. Discussion highlights strategies for implementation in the workplace, implications for practitioners, and suggestions for further research.

Keywords: Workforce Diversity, Dialogue, Group Composition

Multiculturalism. Managing diversity. Valuing diversity. Cultural diversity. Regardless of what it is called, diversity is a highly-charged topic in today's workplace. Workforce diversity has become a major area of focus in the contemporary organizational environment, with many organizations striving to increase the understanding and effective management of a diverse workforce through formalized diversity programs (Whittenburg, 1999; Wilson, 1997).

Formalized programs on diversity in the workplace generally include multiple components or initiatives (Kormanik, 1994), one example being diversity dialogues. The theory and practice of dialogue provides a process for opening up conversation that enhances awareness and understanding of controversial and divisive subjects (Roth, Herzig, Chasin, Chasin, & Becker, 1995). The dialogue process is now being applied as a model for enhancing awareness and understanding of workforce diversity issues (Todd, 1994). In these instances, the dialogue process is primarily designed to enhance individual growth and effectiveness through understanding, rather than focusing on organizational or work group effectiveness.

This paper presents an in-depth study of the implementation of a diversity dialogues initiative. The purpose of the study was to provide an explanatory narrative in a cross-case comparison of the implementation of two pilot dialogues. The narrative is augmented with descriptive statistics. This is not an assessment of the effectiveness of the diversity dialogues as a diversity program initiative. A comprehensive analysis of the efficacy of the initiative would require a long-term, posttest evaluation to ensure validity (Dixon, 1990). Rather, this is a case study of the implementation process, and a discussion of the lessons learned from that process.

Background

The problem section includes two areas. First is a description of the development of formalized diversity programs. Second is information on specific diversity program initiatives.

Development of Formalized Diversity Programs in Contemporary Organizations

The growing awareness of how our melting pot society impacts business has provided the impetus for diversity programs that help organizations deal with societal attitude and demographic changes (Caudron, 1993). It has been only since the late 1980s, however, that private sector organizations began committing the resources (e.g., time, money, people) to establish formal diversity programs. The broad scope of diversity programs in the workplace

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context has involved changing the culture of the organization to better manage the impact of changing workforce demographics and to fully capture the potential in a diverse workforce (Caudron, 1990).

Organizational effectiveness requires viewing broad diversity issues (e.g., communication, team building, interpersonal relations) as systemic in nature (Beer & Eisenstat, 1996; Denton, 1996). A diversity program, therefore, represents a long-term change process, not an isolated event (Caudron, 1993; Johnson & O'Mara, 1992; Winterle, 1993). It is not surprising that organizations with successful diversity programs have generally used a systems approach to program development (Laudicina, 1995; Rynes & Rosen, 1995). Diversity program development is also enhanced through a participative process involving many stakeholders (e.g., management, employees, customers) (Delatte & Baytos, 1993; Gunsch, 1993).

An organization development (OD) approach is often used in the process of diversity program development and implementation. The process starts with an organizational culture audit addressing the organization's informal culture, policies, and management practices. This serves as an organizational needs assessment (i.e., baseline study) and establishes a measure of the current status of the organization. From this baseline, management develops a comprehensive diversity strategy, including: the vision/mission for the diversity program; specific objectives the program is to achieve; specific actions, projects, and initiatives to undertake in support of the diversity program vision; supporting policies and procedures; and a plan for implementation. Senior management in organizations with successful diversity programs suggest that the success of the program is due to close alignment of the diversity program strategy with the organization's business strategy (Caudron, 1993).

Specific Diversity Program Initiatives

Diversity program objectives generally focus on three areas (Kormanik, 1994; Washington, 1995). Increasing representation of underrepresented groups is the first area. Increasing awareness and sensitivity is the second area. Developing an organization culture that supports change is the third area. Each of these foci have implications for planning specific diversity program initiatives.

When the diversity program objective is representation, initiatives concentrate on enhancing recruitment and retention efforts. These diversity initiatives are often unconsciously linked to affirmative action (Laudicina, 1995). Organizations establish affirmative employment programs focusing on the recruitment, advancement, and retention of underrepresented populations (Patterson & Sturdevant, 1980). When the diversity program objective is increased awareness, initiatives emphasize diversity factors associated with legislation under equal employment opportunity (EEO) (e.g., race, gender, religion) and provide a foundation for understanding the legal implications associated with managing diversity in the workplace (Laudicina, 1995). Awareness, skills, and education initiatives frequently emphasize sensitivity and understanding of particular ethnic group traits and behaviors. These programs may be designed to develop an individual's awareness of diversity issues from *pre-encounter* or *intellectualization* to *encounter*, *empowerment*, and *integration* (Kormanik, 1999). Some programs focus on changing workplace behaviors, and sometimes even attitudes. Often called *encounter* sessions, these Gestalt-based training programs provide the opportunity for developing new insights or changing old ones (Bayles, 1960).

When the diversity program objective is systemic culture change, program initiatives promote adaptation and organizational learning. Culture change initiatives entail examining the organization's informal culture, along with awareness and skill building activities that foster culture change. Examining organizational culture involves looking at the shared values and basic beliefs that employees use to govern their behavior (Schein, 1992). The organization culture, or "collective programming of the mind" (Hofstede, 1980, p. 13), may support or impede effective management of workplace diversity issues. Where the organizational culture impedes effective management of diversity, diversity initiatives are designed to promote culture change.

Implementation of Diversity Program Initiatives

According to Karp and Sutton (1993) effective diversity program initiatives include intact work groups to maximize the likelihood of cultural change. Bion's (1961) work with groups at the Tavistock Institute of Human Relations highlights the benefits of working with the group in which the individual functions, as opposed to working only with the individual out of the group context. Initiatives with participants from intact work groups fare better than those with "open" participation, allowing participants to relate first-hand to the diversity factors of the people that they work with on a day-to-day basis. Using intact work groups supports transference back to the workplace.

Hersey and Blanchard (1982) identify knowledge (i.e., facts, information), individual attitude (i.e., mindsets, values, biases, stereotypes), individual behavior (i.e., actions), and group behavior (i.e., mores, norms) as four building blocks of change. Group behavior in this context corresponds to Hofstede's (1980) collective mental programming and Schein's (1992) organizational culture. Hersey and Blanchard suggest that change happens in one of two cycles. Change is either participative, based on personal power (e.g., personality, education, experience, expertise), or directive, based on position power (e.g., law, regulations, guidelines, rank, title).

A diversity program generally includes initiatives that entail participative and directive change cycles. Management has the power to mandate that all employees participate in diversity program initiatives (i.e., directive change). Conversely, participation in the initiatives increases the individual's knowledge base, providing motivation for the individual to change through a participative process (Abella, 1986). Knowledge gained from participation leads to individual attitude change, which theoretically leads to individual behavior change. Using Hersey and Blanchard's (1982) model for change, once a critical mass of individuals change their behavior, group behavior change occurs (i.e., organizational culture change). The change cycle is then complete.

A training initiative—the cornerstone of most diversity programs—is the mechanism most often used for accomplishing all three foci of diversity program objectives (Rynes & Rosen, 1995). Training, however, may be only one of many initiatives sponsored under the diversity program banner (Kormanik, 1994). Other examples include a "diversities day," formal recruitment programs, a poster campaign, EEO and legal issues seminars, brown bag discussions, guest speaker series, focus groups, team building retreats, and diversity dialogues.

Problem Statement

The lack of information on optimal strategies for diversity dialogues implementation in a workplace context is problematic, given the amount of resources (e.g., time, money) allocated to the implementation of a large-scale diversity dialogues initiative. Embarking upon a diversity program without having clear goals in mind can often create more problems and tension than if nothing had been done at all (Rynes & Rosen, 1995). Organizations who are undertaking diversity programs because "they are afraid of doing nothing" often wind up frustrated and troubled (Evans, 1995). Careful planning is needed to ensure alignment with the organization's diversity strategy and to optimize the success of each diversity program initiative.

Theoretical Framework

The theory and practice of dialogue focus on opening up conversations to enhance awareness and understanding of controversial and divisive subjects (Roth, et al, 1995). The dialogue process is often applied to discussions of polarizing societal issues like abortion, capital punishment, and gay marriage (Study Circles Resource Center [SCRC], 1993). Dialogues as a workplace diversity program initiative most directly address the diversity program objective of increasing employee awareness and sensitivity.

Dialogue, however, is different from sensitivity training, active listening, debate, and other such communication processes in that it is collaborative, with two or more individuals working toward finding common ground (SCRC, 1993). Dialogue "emphasizes the idea of a 'meaning' that flows between people from which emerges a greater understanding—possibly even a shared meaning" (Weinstein, 1995). Dialogue requires temporary suspension of one's beliefs, opening up to critical reflection, and reevaluation of underlying assumptions (SCRC, 1999). The open-ended nature of dialogue suggests that there are no "right" answers, nor is there a need to find a solution. It is the process of engaging individuals in the dialogue that is most important to the learning process.

One of the distinctions of adult learning is that adults have a life of experiences to draw from. An adult's "frames of reference" represents the assumptions through which they understand their life experiences (Mezirow, 1997). Frames of reference define the adult's life world and shape the adult's mental and behavioral activity. Adults tend to reject factors (e.g., ideas, values, associations, feelings, responses) which are not in sync with their frames of reference. Mezirow identifies "point of view" and "habits of mind" as two dimensions of frame of reference.

> "Habits of mind are broad, abstract, orienting, habitual ways of thinking, feeling, and acting influenced by assumptions that constitute a set of codes. These codes may be cultural, social, educational, economic, political, or psychological. Habits of mind become articulated in a specific point of view—the constellation of belief, value judgment, attitude, and feeling that shapes a particular interpretation" (p. 5).

Habits of mind and point of view are emblematic of Hersey and Blanchard's (1982) individual attitude construct.

Mezirow (1997) identifies four processes of learning: elaborating on one's existing view, identifying new points of view without changing one's own, transforming one's point of view, and transforming one's habit of mind. A diversity dialogue focuses on the transformative learning processes identified by Mezirow.

> "We can have an experience in another culture that results in our critically reflecting on our misconceptions of this particular group. The result may be a change in point of view toward the group involved. As a

> result, we may become more tolerant or more accepting of members of that group. If this happens over and over again with a number of different groups, it can lead to a transformation by accretion in our governing habit of mind" (p. 7).

The dialogue process is designed to transform point of view, reveal assumptions for reevaluation, and cause introspection on one's own position (i.e., challenge habit of mind) (SCRC, 1993). In Hersey and Blanchard's (1982) terms, the dialogue process is oriented toward participative change, rather than directive.

The dialogue process is structured to encourage the active involvement of all participants (Roth et al, 1995). Abella (1986) shows that getting people involved and showing application to day-to-day life, versus didactic presentation of theoretical or legal information, is the more effective methodology for a diversity program initiative. The dialogue structure also entails a dialogue group meeting at regular intervals to continue the questioning, listening, and reflection processes (SCRC, 1993). Part of the structure comes from a prepared package of materials comprised of a statement of the purpose of the dialogue, ground rules for participation in the dialogue, and an array of articles on the dialogue topic that provide a diversity of perspectives (SCRC, 1999).

The dialogue process indirectly addresses the diversity program objective of systemic culture change. Although dialogue is primarily oriented to the individual level of analysis, the process is also applicable to the organizational setting as a way of cutting through the communication barriers separating organizational subcultures (Schein, 1995). Over time, individuals within the same organization who engage in dialogue will develop shared mental models (i.e., frames of reference), including assumptions about the world, the way the things gets done, and the way things should get done (Boyett, 1995). Organizational learning occurs through the development of these shared mental models. Without shared mental models, organizational learning may be stifled because individual efforts might not be directed towards group or organizational goals.

Many authors suggest that a structured dialogue process involving critical reflection should be the foundation of effective action within any organization (Marquardt, 1999; Schein, 1995; Weinstein, 1995). Schein (1993) argues that "dialogue is necessary as a vehicle for understanding cultures and subcultures, and that organizational learning will ultimately depend upon such cultural understanding. Dialogue thus becomes a central element of any model of organizational transformation" (p. 40). Unlike many diversity initiatives, diversity dialogues move beyond shaping behaviors to changing personal attitudes and challenging prejudice and stereotypes. This change process is ideally suited to a diversity program initiative.

Research Questions

The purpose of this pilot study was to examine the process of implementing diversity dialogues in a workplace setting prior to undertaking a large-scale diversity dialogues initiative. There were two research questions: should dialogue participants be chosen from across the organization or from within a local jurisdiction, and what strategies should be used for implementing diversity dialogues in a workplace setting, given a particular organizational culture?

Methods

This was a study of a single entity bounded by time and activity. Lincoln and Guba (1985) suggest that such a case study be conducted in a natural setting, noting that phenomena "take their meaning as much from their contexts as they do from themselves" (p. 189). The organizational context provided the natural setting. Qualitative data was collected from multiple sources. The summaries of each of the dialogue sessions, developed by the dialogue participants and two of the authors, were the primary source of data. The third author provided personal observations as a key stakeholder. The qualitative data also includes first-hand observations from the authors' journaling during the duration of the study. Data came from other stakeholders, including the EEO Program Office, human resources, and management representatives. Physical artifacts were examined, including the organization's strategic plan, a recent employee opinion survey, diversity statement, and other documents.

The qualitative data was augmented with descriptive statistics. Quantitative data was collected using an instrument administered after the last dialogue session. Information on the validity and reliability of the instrument was not available prior to this study. The instrument asked for participants' reaction to the diversity dialogues initiative, as well as their perceptions on the dialogue process, its applicability to the organizational context, and whether the stated objectives for the diversity dialogues were met. The body of the instrument consisted of 32 statements. Participants responded to the statements by indicating "Strongly Agree," "Agree," "Undecided," "Disagree," or "Strongly Disagree." Thirteen of the rated statements produced data addressing the research questions in this study.

Data analysis included description and identification of themes in the findings and assertions. This study used a highly participatory mode of research, involving dialogue participants in every phase of the study. Dialogue participants provided notetaking during the dialogue sessions and member checking of the summary reports of prior dialogue sessions.

The Site

The site for this study (the Agency) was a 3,200-employee component of a larger Federal organization. The Agency's mission is scientific and extremely technical in nature. Primary focus and priority is given to technical issues. Technical proficiency is highly valued, and the Agency has a enjoyed a history of leading in technical competence. The high focus on technical competence has greatly de-emphasized the importance of "people" issues, leaving the perception that mediocrity on people issues is acceptable. As a result, the Agency has faced difficulty in recruiting and retaining employees. This compounds the issue of having a representative workforce and has brought the issue of workforce diversity to the forefront. A 1997 employee opinion survey and focus groups conducted in 1998 and 1999 also have increased attention to diversity issues.

Beginning with a 1987 retreat for key stakeholders, the Agency has conducted many diversity program initiatives. These initiatives have addressed all three areas of diversity program objectives identified earlier (e.g., demographic representation, awareness and sensitivity, systemic culture change). Specific initiatives have included training programs; the establishment of a multi-cultural advisory team; the development of a Diversity Management Plan in 1994; diversity "celebrations" with educational speakers, ethnic food, and entertainment representing different cultures; and several seminars that dealt with specific aspects of diversity in the workplace. Diversity dialogues were the latest in the series of planned diversity program initiatives.

Pilot Diversity Dialogues

An OD approach was used in planning the diversity dialogues initiative. Discussions with Agency representatives over several meetings and telephone conversations helped to assess the current state of the organization prior to the implementation, clarify the desired state, identify the barriers to attaining the desired state, and a plan of action for implementation. The project was intended to enhance personal growth and development, provide an opportunity for surfacing diversity issues, foster individual perspective and behavior change, and help participants understand and model appropriate work place behaviors. The project was *not* intended to provide an organizational solution to diversity issues, remedy the past, or replace other diversity program efforts.

Diversity dialogue sessions were envisioned as a follow-on training initiative that could have implications in various workplace settings. One such application was for intact work units to come together and engage in dialogue about diversity and related topics that affect the local work climate. Another was for "change agents" from across the organization to have a forum to discuss their experiences at the organization from a personal perspective and to be able to work together to make the organization more inclusive and effective in the future. These two perspectives resulted in the plan to pilot two diversity dialogues groups.

Twenty-five dialogue participants were purposefully chosen based on their interest or involvement in previous diversity activities or for having supported workforce diversity through their individual actions. It was assumed that these individuals could provide a balanced perspective on the diversity dialogues pilot. The 13 member "cross-organizational" group was contacted personally by a member of the staff of the Agency's Director and asked if they would be interested in participating. The 12 member "localized" group was chosen from one directorate within the organization. Participants were selected by the Directorate Head, who made personal contact with each participant by asking if they would be interested in participating. In both instances, participants were chosen to maximize the diversity in each pilot group, using such diversity factors as age, race, national origin, and occupation.

Using a structured framework to guide discussion , the diversity dialogues included 10, two-hour sessions were scheduled over a six month period. Initial sessions were scheduled one week apart, with the duration between sessions expanding to four weeks by the last session. All dialogue sessions were conducted on-site, at various buildings in the Agency's campus-like setting. The first session was an orientation for all dialogue participants. Participants were given a dialogues package which included the project purpose and objectives, expectations, framework, schedule, excerpts from the Agency's Management Plan and values statement, and articles illustrating differing perspectives on diversity. A summary of the previous session was e-mailed to each dialogue participant several days in advance of each session. The facilitators opened each session by reviewing the summary and the expectations for the current session. The articles were used to stimulate thought and discussion. Several management models were also used to examine the individual's approach to change surrounding diversity in the Agency's work environment.

Findings

This section reports the findings for the two research questions. First is data on the choice of dialogue participants (i.e., localized vs. cross-organizational). Second is data on strategies for implementing diversity dialogues in a workplace setting.

Localized vs. Cross-organizational

On average, eight participants of the cross-organizational group were present for each session. Attendance for the localized group averaged five participants. In this group, one participant stopped attending, citing that the dialogue would not help in career progression. Another cited job demands. One session was canceled after only two participants showed up. Several participants stopped attending without any explanation.

Discussions with participants in both groups indicated several reasons for low attendance. The dialogue activity was not valued, placing the activity at a lower priority when compared to mission-specific activities. Some participants wanted a direct connection between participation in the dialogue sessions and career advancement. The irregular scheduling and location changes were also cited as reasons for low attendance. In the last dialogue session, several localized group participants noted they initially thought participation was "mandatory." When two group members who were perceived as highly-visible in the directorate dropped out, perception that participation was mandatory shifted to "discretionary." The lack of a sustained management challenge to participate showed several of the remaining participants that the diversity dialogues were not that important.

Qualitative survey data show 100% of respondents thought participants in a diversity dialogue group should be representative of the diversity of the Agency. The majority (85.7%) thought participants in a diversity dialogue group should be drawn from across the Agency, *not* from the same directorate. Only 21.4% thought that participants in a diversity dialogue group should be from intact work groups. The statement that having people from the same work group inhibited dialogue discussion received a mixed response, with 35.7% disagreeing and 42.9% agreeing.

There was high agreement (92.4%) among respondents that their own supervisor should participate in a dialogue group. It was unclear, however, whether employees would like to have had their own supervisor participate in their dialogue group, with 35.7% agreeing and 35.7% disagreeing. While 35.7% agreed that including employees and their supervisors/managers in the same dialogue group would impede the dialogue, 21.4% *strongly disagreed.*

Implementing Diversity Dialogues in the Workplace

The culture of this workplace gives priority to the technical mission, almost to the exclusion of all other activities. Participants suggested that managers and employees do not see diversity as an integral part of mission accomplishment. They noted that, in this scientific environment diversity is seen as amorphous, without easily calculated metrics or solutions. Participant observations of management reaction to diversity issues have included denial, disregard, and avoidance. Discussion of diversity detracts from mission accomplishment and should be avoided. Diversity issues are ignored unless there is an associated problem with the task at hand. When data indicates a diversity problem, there follows a request for more data for analysis rather than any attempt to understand and address the issue.

Discussion of diversity in the workplace is difficult, takes time, and involves risk, making it hard to do in a risk-averse environment where time is a highly-guarded resource. This workplace culture leaves employees doubtful of the importance of diversity to the overall business strategy and to mission accomplishment. Dialogue participants continually talked about mixed signals when examining the Agency's response to diversity issues. The value of the diversity dialogues initiative was questioned. One participant summed it up with, "I have to get my job done, so my interest in coming to the sessions doesn't matter, just like my diversity doesn't matter."

Other data regarding implementation of diversity dialogues in the Agency are worth noting. Given the Agency's culture, it was not surprising that 64.3% thought participation in the dialogue should be mandatory for all employees and managers. Although 78.6% disagreed that each session should be limited to one hour, 85.7% agreed that two hours for each session was sufficient time for dialogue. Participants (78.6%) agreed that dialogue sessions should be scheduled at regular intervals (e.g., weekly, biweekly, monthly). There was equal (42.8%) agreement and disagreement that scheduling 10 sessions over six months was appropriate for the dialogue, however, 35.7%

strongly disagreed. Only 14.2% agreed they were not interested in facilitating a diversity dialogue at the Agency in the future.

Discussion

The research questions focused on participant mix and strategies for implementing diversity dialogues in a workplace setting. This section includes a separate discussion of each research question, although the findings suggest a great deal of interdependence between the two issues.

Localized vs. Cross-organizational

The data on the issue of participant mix indicate that a cross-organizational group would be preferable to one chosen from within a localized jurisdiction. While it was anticipated that the localized group in the study would establish relationships and explore diversity issues more quickly, this was not the case. The cross-organizational group progressed more quickly. This finding conflicts with the literature suggesting an intact group would fare better (Bion, 1961; Karp & Sutton, 1993).

In both groups, administrative employees had a greater drop out rate than employees from core occupations. This was surprising, given the Agency culture. The expectation was that participants holding core occupations would drop out at a greater rate because they felt pulled to the "real work." The findings suggest that individuals who are already regarded as "second class citizens" (e.g., administrative and support employees) cannot afford to increase the perception that they are not contributing to mission accomplishment by participating in "peripheral" activities. It is ironic to note that the majority of participants to drop out of the localized group were in administrative/support positions.

Attendance and level of involvement were higher for the cross-organizational group of employees. Participants from the localized group viewed the dialogues as another competing demand, albeit one with low priority. Consistent with the emphasis on the mission, dialogue participants generally opted to attend technical meetings over the dialogue sessions. There were perceived negative consequences to missing work-related meetings, while there were no perceived consequences for missing dialogue sessions.

Attendance for both groups was helped by reminder notices preceeding each session. The notes highlighted the previous session and introduced discussion questions and reading assignments for the upcoming session. Participants found the reminders helpful in providing information and structure, and in helping them to give the sessions priority on their work schedules.

Implementing Diversity Dialogues in the Workplace

Fundamentally, a diversity initiative must create awareness of diversity, its impact on the workplace, and its impact on the bottom-line (Johnson & O'Mara, 1992). Diversity initiatives generally must link the diversity program to the corporate culture and business objectives of the organization to be successful (Karp & Sutton, 1993; Winterle, 1993). The dialogue process represents a major shift from this philosophy. It also represents a major change for the Agency's task-oriented employees. Clearly, organizational learning was impeded by the lack of shared mental models linking diversity program initiatives and mission accomplishment. The focus on task was detrimental to dialogue attendance. Employees are quick to use the scientific method, collecting and analyzing data to solve a technical problem. When faced with a diversity issue, they take a different, more cautious approach.

Dialogue participants wanted tools and the "right answers" to questions about diversity issues. This expectation is anathema to the dialogue process. Studies show failure of diversity initiatives is often due to unclear expectations (Delatte & Baytos, 1993; Karp & Sutton, 1993). Even though participants understood the purpose, they sometimes viewed the dialogues as "training" and were frustrated at times when there were no "right answers" available. Despite the occasional frustration, participants commented that they learned about self and had a greater appreciation for other participants, as well as a better understanding of diversity issues through the dialogue.

Several participants noted that the dialogues were the only option for open discussion of diversity issues in their workplace. Even though participants in the study may have been predisposed to support diversity and perceived the need to participate in the dialogues pilot, they opted for work-related meetings when given a choice. The data indicate that individuals want to talk about these issues but, at work, they see the emphasis on, think they'll be rewarded more for, and would rather spend time on work directly related to mission accomplishment.

Conclusions

This study looked at the issues of participant selection and strategies for implementing diversity dialogues in an organizational setting. The data show that using a cross-organizational group of participants was preferable to a localized group. Regarding strategies for implementing dialogues in a workplace setting, it could be inferred that the Agency's culture was not conducive to the diversity dialogues process. The workplace focus on task to the exclusion of other activities, the de-emphasis on discussing non-work issues, the limited communication skills of employees and managers, and the inability to see the nexus between diversity and mission accomplishment surfaced as challenges to effective dialogue implementation in a workplace setting.

The data from this study show that the organization's management can increase participation in the diversity dialogue initiative by increasing the status of the initiative. One way to accomplish this is by directive change, making dialogue participation mandatory. Alternative options, such as showing visible support and personal participation from management may prove more beneficial to changing the culture through a participative change cycle, similar to that described by Hersey and Blanchard (1982). Mezirow (1997) suggests that in attempting a transformative learning process, an individual's "points of view are more accessible to awareness and to feedback from others" (p. 6). Transforming habit of mind requires heightened awareness and critical reflection of generalized bias. This commonly indicates the need for participative change. While mandating the program for all employees may improve attendance, the quality of that participation may not support transformative learning.

The purpose of the study was to provide an explanatory narrative in a cross-case comparison of the implementation of two pilot dialogues. It was not intended to examine the effectiveness of diversity dialogues as a specific diversity program initiative. Further research is needed addressing the larger issues of diversity program effectiveness and the linkage between diversity programs and organizational performance. This study was also limited to one organizational context and the dialogue focus limited to the issue of workforce diversity. Comparison of these results with research in other organizational contexts and focusing on other dialogue topics is warranted.

Contribution to New Knowledge in HRD

There are two primary contributions to new knowledge for HRD practitioners. First, the data show that using a cross-organizational group of participants was preferable to a localized group. Second, yet more substantive findings dealt with the issue of strategies for implementation of dialogues in a workplace setting. Arguably, there are numerous reasons for the failure of diversity program initiatives. Kormanik and Geffner (1995) show three primary restraining factors: a lack of personal responsibility and accountability, a lack of positive leadership at all levels, and a lack of visible management commitment. All three of these barriers surfaced in this pilot study, and must be strategically addressed in any workplace implementation of diversity dialogues.

Specific strategies, however, may enhance the success of dialogue implementation. Strategies include visible management endorsement giving diversity priority on par with the "real work;" senior management participation, direct involvement, and scheduling flexibility; increased positive communications throughout the workplace to give the activity greater status and priority; and an increased premium on developing "soft" skills (e.g., communication, interpersonal relations, team building). All of these may represent systemic organizational culture change.

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Evaluation of Diversity Initiatives in Multinational Corporations

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The purpose of this study was to provide information on the evaluation of diversity initiatives in multinational corporations. Eight multinational corporations headquartered in the United States were selected for this study. Two methods of data collection were used: semi-structured face-to-face interviews with diversity managers/directors, and document analysis. The study revealed that despite the difficulty in determining the impact of diversity initiatives, the corporations are making efforts to come up with measurements that can lead them to confirm the value that diversity initiatives have to the organization's profitability.

Keywords: Diversity Initiatives, Evaluation, Multinational Corporations

The changing workforce is one of the most extraordinary and significant challenges facing many organizations today. Workforce diversity is a demographic phenomenon playing upon not only American organizations but also multinational corporations and institutions in other countries around the world (Littlefield, 1995; Morosini, 1998). In addition, other business forces such as global competition and the need to remain competitive are driving diversity into organizations regardless their geographical location.

Theoretically, international business has been one of the pioneer fields in valuing diversity (Simons, 1992). Diversity, in this case, has emerged as a need for survival and success. Multinational corporations are forced to develop and implement initiatives that could lead them to capture and retain diverse customer bases not only nationally but also throughout the world (Albert, 1994; Fernandez, 1993; Florkowski, 1997; Norton & Fox, 1997). They are also required to recruit and retain a diverse workforce that mirrors its diverse market.

During the last decade, many organizations have responded to the increase in diversity with a variety of initiatives designed to manage diversity in the workplace (Arredondo, 1996; Baytos, 1995; Cross & White, 1996; Hayles & Russell, 1997; Loden, 1996; Thomas, 1996). For the purpose of this study, diversity initiatives are defined as specific activities, programs, policies and any other formal processes or efforts designed for promoting organizational culture change related to diversity (Arredondo, 1996). Examples of such initiatives include nontraditional work arrangements, such as flextime and home work stations; education and training programs intended to reduce stereotyping, increase cultural sensitivity, and develop skills for working in multicultural environments; career management programs designed to promote constructive feedback to employees, mentoring relationships, and access to informal networks; and new employee benefits, such as parental leave and dependent-care assistance (Arredondo, 1996; Hayles & Russell, 1997; Jackson, 1992;).

Morrison (1992) grouped the diversity initiatives found in 16 exemplary organizations in four groups: (a) diversity; (b) accountability; (c) development; and (d) recruitment practices. Similarly, by using several case studies based on large American corporations, Gottfredson (1992) was able to group diversity initiatives into five categories: (a) procedures to reduce ethnic and gender differences in career outcomes; (b) procedures to accommodate immigrants to the United States; (c) changes in organizational climate to value and utilize ethnic and gender differences; (d) changes in procedures or climate to accommodate individual differences among employees; and (e) decentralized problem solving to accommodate local conditions. The first three categories listed above address diversity issues related to ethnicity and gender, and the last two categories encompass all individual differences and are directed to all employees.

Several of the nation's major employing companies have started implementing a great number and variety of diversity initiatives. There are many reasons companies are implementing these initiatives in the workplace. Some of the purposes that drive diversity programs are: Compliance, harmony, inclusion, justice, and transformation (Rossett & Bickham, 1994). Wentling and Palma-Rivas (1998) interviewed diversity experts from across the United States and discovered that companies are managing diversity because it helps organizations improve productivity and remain competitive, form better work relationships among employees, enhance social responsibility, and address legal concerns. However, "it is unknown whether these programs are, in fact, producing expected gains, because so few organizations have evaluated their outcomes" (Comer & Soliman, 1996, p. 473).

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Even though there are many reasons to evaluate the impact of diversity initiatives, the lack of attention to evaluation of diversity initiatives has been reported by several authors (Comer & Soliman, 1996; Johnson, 1995; Wheeler, 1994; Triandis & Bhawuk, 1994). "To ascertain if their investments are cost effective, mechanisms should be in place to measure the success of diversity efforts" (Comer & Soliman, 1996, p. 473). Casse (1991) stated that diversity programs should be evaluated to measure the nature of return on investment to match the cost involved in them and to compare the situation before and after the program. It is also possible that "well-intentioned diversity efforts can cost an organization a great deal of time and money and yet not create any significant, lasting change" (Morrison, 1992, p. 230). According to Comer and Soliman (1996) lack of appropriate measures does not exclude organizations form assessing the impact of diversity initiatives. Conversely, it underscores dramatically the need for practitioners and researchers to develop such measures in order to determine whether organizational efforts to manage diversity are really effective.

Purpose and Scope of the Study

The purpose of this study was to identify practices, strategies, and processes that are used to evaluate diversity initiatives in multinational corporations. Overman (1992) reported that companies concerned about the value of diversity are still "struggling to find concrete ways to measure whether they are succeeding" (p. 38). An in-depth understanding was provided through this study to contribute to diminishing the lack of knowledge in the evaluation of diversity initiatives in multinational corporations. Specifically, this study addressed the following four research questions:

1. How are diversity initiatives being evaluated in corporations?
2. How is the success of diversity initiatives measured in corporations?
3. How effective are diversity initiatives in corporations?
4. What components of diversity initiatives are difficult to evaluate in corporations?

Methodology

This was a descriptive and exploratory study. Two major methods of data collection were used: semi-structured face-to-face interviews and document analysis. Interviews were conducted with workforce diversity manager/directors who are responsible for diversity initiatives in multinational corporations headquartered in the United States. The data obtained through the interviews consisted of words in the form of rich verbal descriptions (qualitative data), as well as quantitative data. Essentially, this study used a qualitative approach to answer the research questions. A quantitative method in the form of frequencies and percentages were also used to support the qualitative data. The second major method of data collection used was document analysis. Documents related to the evaluation of diversity initiatives in the multinational corporations were collected from primary and secondary sources. Documents were solicited from the corporations and from standard literature sources, such as, annual reports, community relations reports, world-wide-web, newspaper articles, and diversity-related books in which the corporations were featured. The data obtained from these documents provided insightful and enriched information that was used to confirm and verify the information provided by the study participants during the face-to-face interviews.

Population and Sample

The population for this study was composed of the 30 multinational corporations in a mid-west state in the USA listed in the book entitled, Directory of Diversity in Corporate America (1994). From those 30 corporations, a sample of eight was randomly selected to participate in the study. The population and sample that was selected for this study was ideal because in order for a corporation to be included in the Directory of Diversity in Corporate America (1994), it must meet the following criteria: (a) have extensive experience with workforce diversity, (b) be multinational corporations, (c) be allocating resources to diversity initiatives, and (d) have launched successful corporate diversity initiatives.

Eight diversity managers/directors at eight USA based Fortune 500 multinational corporations were interviewed. The diversity managers/directors work in corporations with sales varying from $10 billion to more than $50 billion, and asset from $12 billion to more that $60 billion. The number of employees in these corporations ranged from 48,100 to 378,000. The average number of employees in these eight corporations was 125,250. The study participants are employed in a variety of industries, which include the following: Food (3); Electronics (1); Chemicals (1); Petroleum (1); Pharmaceuticals (1); and Specialist Retailer (1).

Data Collection

The data were collected through interviews and document analysis. The researcher conducted face-to-face interviews with eight workforce diversity manager/directors in charge of diversity initiatives in eight multinational corporations in a mid-west state in the United States of America. The researcher developed a semi-structured interview guide to assist in collecting the data from the interviews. Semi-structured interviews were chosen because they are "reasonably objective while still permitting a thorough understanding of the respondent's opinions and the reasons behind them" (Borg & Gall, 1989, p. 452).

In addition, the researcher conducted a document analysis of written and printed materials related to the evaluation of diversity initiatives in the multinational corporations. According to Gall, Borg, and Gall (1996), by studying past documents researchers can achieve a better understanding of present practices and issues. In addition, documents can be accessed at a time that is convenient to the researcher and saves time and expense in transcribing (Creswell, 1994).

A study advisory committee, made up of four human resource development (HRD) educators from a leading university in the USA, who have expertise in diversity, evaluation and qualitative research methods, reviewed the interview guide and study procedures. Also, to determine content validity and appropriateness of the interview guide, a pilot study was conducted with two diversity directors of the same target population for the study. There was agreement by the study's advisory committee and the pilot test participants that the study procedures, interview guide and the data being collected were appropriate for meeting the objectives of the study.

Data Analysis

The data from the interviews were content-analyzed. Content analysis is a research technique for systematically examining the content of communications--in this instance, the interview data. The researcher and another researcher associate independently analyzed the participants' responses and the related issues that arised during the interview process. No major discrepancies were found when the analyses from both researchers were compared. The researchers read the responses, put them together as complete quotations, and filed them according to the topic or issue addressed. Responses were analyzed thematically. Emergent themes were ranked by their frequency of mention and finally categorized. Data obtained through the interviews were analyzed qualitatively and quantitatively. Quantitative data were used to provide the basic research evidence, while qualitative data were used to round out the picture and provide examples.

Documents were collected and analyzed prior to, during, and after the interviews. All together there was a total of 47 related documents analyzed. Related documents obtained from the world-wide-web, corporate sources, books, newspaper articles, and so forth were all included in individual files for each of the corporations in the study. The researcher coded the related documents by relevant topic as they related to the major research questions. To further assist in ensuring the reliability of the data analysis, the researcher invited a diversity manager from a multinational corporation in the west coast to review four of the interviews. The ratings (frequencies of emergent themes) of the diversity manager matched the researchers' ratings in all of the four interviews reviewed. The same procedure was followed for the related documents analysis, which produced similar results.

Results

The results of this study are summarized in four major sections which parallel the research questions: (a) Methods for evaluating diversity initiatives, (b) How the success of diversity initiatives are measured, (c) Effectiveness of diversity initiatives, and (d) Components of diversity initiatives that are difficult to evaluate.

Methods for Evaluating Diversity Initiatives

Six (75%) of the organizations evaluate diversity initiatives. A basic theme that emerged from the study participants was that evaluating diversity initiatives effectively was difficult and time consuming. Despite the difficulty of evaluating diversity initiatives, all of the organizations in the study were attempting to measure their effects on employees and the organization. The study participants together cited twelve methods for evaluating diversity initiatives. The range of evaluations methods cited by participants numbered from 3 to 7. The average number of evaluation methods used was 4.8. Table 1 presents participants in rank order by frequency all the methods for evaluating diversity initiatives that were cited by the study.

Table 1
Methods for Evaluating Diversity Initiatives (n=8)

Method	f	%
1. Employee surveys	6	75
2. Track employment data	6	75
3. Management annual performance reviews	4	50
4. 360-degree feedback	4	50
5. Focus groups	3	38
6. Benchmarking	3	38
7. Diversity-specific surveys	3	38
8. Customer feedback	3	38
9. Informal employee feedback	2	25
10. Informal employee group feedback	2	25
11. Employee attitude surveys	1	13
12. Peer reviews	1	13

Six (75%) of the study participants indicated they used employee surveys, and another six (75%) stated that they tracked employee data to evaluate the effectiveness of diversity initiatives. The employee surveys were used to gather data from employees to determine their perceptions one to two years after the original employee survey was conducted. The data collected from these surveys gave the organization a basis for comparison from the point at which it began the initial diversity initiative effort. The corporations that tracked employee data reviewed the information to determine where improvements had been made in such areas as turnover rates, retention, hiring, and promotion of women and minorities. In addition, data were reviewed to determine if people from diverse groups were represented at all levels of the organization, especially at the top management ranks.

Half of the corporations in the study used management annual performance reviews and another half used 360-degree feedback as methods for evaluating diversity initiatives. The management annual performance reviews were used to determine if the manager's business unit was reaching effective and profitable results by fully utilizing a more diverse workforce. The 360-degree feedback process was used to provide employee feedback to management related to his or her skills and abilities in addressing diversity issues. This information was then used to better develop managers in dealing with diversity issues.

Three (38%) of the study participants reported using focus groups as a method for evaluating diversity initiatives, another three (38%) used benchmarking, another three (38%) used diversity-specific surveys, and another three (38%) used customer feedback. The focus groups were used to gather information from employees to determine their perception about the progress of diversity initiatives in the organization. Benchmarking was used to assess the company's progress related to diversity in relation to other companies who are exemplary in addressing diversity. Diversity-specific surveys were used to obtain information about the climate of the company from various diverse employee groups. Customer feedback was used to determine if their diverse customers' needs were being met by the company's products, services, and employees. In addition, informal employee feedback, informal employee group feedback, employee attitude surveys, and peer reviews were methods of evaluation of diversity used by two (25%) or one (12.5%) of the corporations.

How Success is Measured for Diversity Initiatives

The study participants were asked to specify how success is measured for diversity initiatives in their corporations. The study participants cited fifteen methods for measuring success of diversity initiatives. The range of methods cited by participants numbered from 5 to 12. The average number of methods used was 8.5. Table 2 presents in rank order by frequency all the methods for measuring success of diversity initiatives that were cited by the study participants.

Table 2
Methods for Measuring Success of Diversity Initiatives (n=8)

	Method	f	%
1.	Leadership commitment	8	100
2.	Representation of diversity at all level of the organization	8	100
3.	Measure progress against stated goals and objectives	6	75
4.	Diversity initiatives are assisting to meet the company's strategic plans goals	6	75
5.	Promotion rates	5	63
6.	Hiring rates	5	63
7.	Turnover rates	5	63
8.	Retention rates	5	63
9.	Absenteeism rates	5	63
10.	Performance ratings	3	38
11.	Attitude and behavioral change	3	38
12.	Employee satisfaction	3	38
13.	Complains about diversity issues	2	25
14.	Work group performance	2	25
15.	External recognition and awards	2	25

All of the study participants indicated that they looked at leadership commitment as a way of measuring success of diversity initiatives. According to the study participants, there is an indication of success if leaders in the organizations are committed and supportive of diversity initiatives and are willing to allocate resources to help ensure the success of diversity efforts. All the participants also reported using representation of diverse populations at all levels of the organization as a method for measuring the success of diversity initiatives.

Six (75%) of the corporations studied measured their success by observing goals and objectives attained, and another six (75%) noticed if diversity initiatives were assisting in meeting the goals of the company's strategic plan. If they achieved their goals, then they could conclude that the diversity initiatives were successful.

Five (63%) of the study participants reported using promotion rates, hiring rates, turnover rates, retention, and absenteeism rates as methods for measuring success of diversity initiatives. These measures were set to obtain their objective of creating and maintaining a diverse workforce and also of meeting Affirmative Action requirements.

Three (38%) of the study participants indicated they use performance rates, attitude and behavioral change, and employee satisfaction as methods for measuring success of diversity initiatives. These measurements were often achieved through performance appraisals, conducting informal employee feedback, and general observations.

Complaints about diversity issues, work group performance, and external recognition and award were used by two (25%) of the corporations studied as methods for measuring success of diversity initiatives. It is interesting to note that although only two (25%) of the study participants identified external recognition and award for measuring success, the review of the related documents revealed that all of the corporations had received widespread public recognition for their exemplary human resource practices related to diversity. For example, half of the corporations in the study were included in the book, The Best 100 Companies for Minorities, three (38%) were included in the book, Best Companies for Working Mothers, two (25%) had received the Catalyst Award for innovative efforts in providing equal opportunity for women and minorities, and another two (25%) had received the Manufacturer of the Year Award for its community citizenship and commitment to women and minority employees.

How Effective Diversity Initiatives Have Been

The study participants were asked to specify how effective the corporation's diversity initiatives had been. Six (75%) of the study participants stated that the diversity initiatives have been very effective and have had a positive impact on employees and the organization. Two (25%) of the study participants indicated that the effectiveness and impact have been average, meaning that diversity initiatives have had a relative success. These two research participants based their opinions on just perceptions because (a) it was too early to judge the effectiveness or impact of the diversity initiatives and (b) there was no hard data available at the time the interviews took place.

The following statements were made by the study participants on the degree of effectiveness or impact of diversity initiatives.

> "Some examples of our success are the positive feedback that we get from our employees regarding the benefits of our diversity efforts, such as training. Also, the positive feedback we get when we do presentations about how and why we are addressing diversity. From what I sense and hear, diversity is very well received in this organization. The employees are beginning to feel much better and they sense that managers are now walking the talk."

One of the study participants indicated that their diversity initiatives have been successful because (a) the minority representation has changed throughout the organization and (b) their diversity initiatives are being highly benchmarked. For them that meant that many other organizations have followed their example regarding diversity initiatives. This study participant stated,

> "We know that the number of women has increased tremendously. There was a time when very few women were working in this corporation. We know that there is a major shift in the employee make up. Women are now represented in all key departments and this is a major shift in terms of how we've grown and changed. Sometimes we get external recognition by impartial organizations for our efforts in providing opportunities for women."

Another study participant said, "We have very good results based on our diversity initiatives and top management is very happy with our work and progress and the impact we are having on the company." Still another study participant stated,

> "We have been very effective in that we have raised diversity awareness throughout the entire organization from top to bottom. The organization as a whole understands the value and business impact of diversity. This has resulted in many more business units implementing diversity related initiatives."

The two study participants who indicated that it was too early to judge success and effectiveness of diversity initiatives had this to say: "Effectiveness and impact should be data driven. I can't give you any hard data because I need another year. However, based on perceptions and generally speaking diversity is well supported." The other study participant stated,

> "It is going to take a while before we really know how successful and effective we are going to be, because we are talking about a cultural change and this is going to take time. We realized that it is going to be at least a three to five year effort. Therefore, it is too early for us to judge our successes and effectiveness."

Components of Diversity Initiatives That Are Difficult to Evaluate

The study participants were asked to identify the components of diversity initiatives that were difficult to evaluate. The study participants cited six components of diversity initiatives that were difficult to evaluate. The range of components cited by participants numbered from 2 to 4. The average number of components cited was 3. Table 3 presents in rank order by frequency all the components of diversity initiatives that are difficult to evaluate that were cited by the study participants. Six (75%) of the study participants indicated that impact of diversity on bottom-line (profitability) was difficult to evaluate. Another six (75%) stated that impact of diversity on productivity was difficult to evaluate. According to the study participants, bottom-line (profitability) impact and productivity are two of the greatest challenges in evaluating the effectiveness of diversity initiatives. The reasons for these challenges were that bottom-line (profitability) and productivity are influenced by so many factors that it was difficult to isolate the specific diversity initiatives that caused the increased productivity or profit levels.

Five (63%) of the study participants found it extremely difficult and time consuming to evaluate the return-on-investments of diversity initiatives. These participants indicated that they did not have an effective method for measuring the profitability gain that resulted from the money invested on diversity initiatives.

Behavior changes and employee attitudes were mentioned as difficult to evaluate by three (38%) of the study participants. Attitudes and behavioral changes were seen as difficult to evaluate because they may take a long time to occur and many times may go unnoticed. One of the study participants stated that internal readiness to launch diversity initiatives was difficult to evaluate. Internal readiness meant that employees and managers were ready to accept diversity as part of the organizational culture. This was seen as difficult because there was no effective way to determine if organizational members were ready for this change, which was seen as necessary and critical for effective implementation of diversity initiatives

Table 3
Components of Diversity Initiatives That Are Difficult to Evaluate (n=8)

Method	f	%
1. Impact of diversity on bottom-line (profitability)	6	75
2. Impact of diversity on productivity	6	75
3. Return-on-investment	5	63
4. Behavior changes	3	38
5. Employee attitudes	3	38
6. Internal readiness	1	38

Discussion

This study found that all corporations were attempting to evaluate the effects of their diversity initiatives on employees and organizations. The study also revealed that, in an attempt to evaluate their diversity initiatives, each company uses a variety of methods. This finding does not support the findings reported by Morrison (1992). She found that very little is being done in evaluating particular diversity practices. What this study revealed is that evaluation of particular diversity initiatives seems to be rather new among the corporations that participated in the study. This study also found that effectiveness of evaluations is a major concern. The corporations in this study seem to recognize that diversity initiatives need to be evaluated. Because of the emphasis on evaluation and well-elaborated tools some corporations have to evaluate diversity initiatives, it is possible to conclude that evaluation is becoming a more important part of the process of diversity initiatives. Other authors have also emphasized the importance of conducting evaluations for diversity initiatives (Arredondo, 1996; Jackson and Associates, 1992; Morrison, 1992; Rynes and Rosen; 1995). Evaluation is an on-going process and is critical to the success of any diversity initiative.

This study also examined how corporations measure the success of their diversity initiatives. Leadership commitment and representation of diversity at all levels of the organizations were the most common ways for measuring success. These findings are consistent with results obtained in this area by Wheeler (1996). He examined the corporate practices in diversity measurement, and what he found was that leadership commitment is a critical measurement component to ensuring that the organizational culture supports diversity initiatives.

This study identified impact on bottom-line, impact on productivity, and return-on-investment as the components most difficult to evaluate for diversity initiatives. Similar areas difficult to evaluate were reported by a study conducted by Wheeler (1996). Wheeler's study revealed that productivity, growth, and profitability of diversity strategies remain the most challenging and difficult areas to measure. There seem to be at least two reasons people in corporations have identified bottom-line, productivity, and return-on-investments as difficult to evaluate. These areas are usually affected by many variables, and it is difficult to isolate cause-effect relationships (Wheeler, 1994). Interestingly, even when there might be an increase in profitability and productivity due to diversity initiatives, it is difficult to prove that diversity is the reason for such improvement (Morrison, 1992). Another reason might be that people do not have the necessary knowledge, skills, and experience to determine the overall impact of diversity initiatives. Despite the difficulty in determining the impact of diversity initiatives, the participants in this study were making efforts to come up with measurements that can lead them to confirm the value that diversity initiatives have to the organization's profitability.

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Change: The Japanese Workplace and the Aging Workforce

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The Japanese workplace is changing as the workforce ages. Japan's population is aging faster than any country in the world. In 2000, one in four workers will be over the age of 55. Lifetime employment, fewer advancement opportunities, and retirement issues are problems arising in the Japanese workplace. The impact of this aging workforce is crucial for the employees and for the companies as they plan for employment opportunities of the 21st century.

Keywords: Japanese, Workplace Changes, Aging

As the 21st century begins, the workforce of Japan is aging faster than any other country in the world. In 1997, the Japanese population aged 65 years and older exceeded the number of children under 15 years of age by 50,000 (Kawanishi, 1997). Although 50,000 is a relatively small number in populace terms, this occurrence advanced Japan to the forefront of countries that are also experiencing an increase in their older population (Japan Insight, Population, 1999).

Soon Japan's population of over 125 million will experience even more demographic changes. First, there is a declining growth rate that dropped to 0.25 percent in 1999 ("Population Grows," 1998). Second, life expectancy in Japan has greatly increased due to the drop in infant mortality, advances in medicine, and a general interest to maintain good physical fitness (Campbell & Campbell, 1991; Japan Insight, Background, 1999). Immediately after World War II, few Japanese could expect to live past the age of 55. Now a Japanese woman's life expectancy is 83 and a Japanese man's life expectancy is 76 (Kawanichi, 1997; Japan Insight, Population, 1999; Campbell and Campbell, 1991). By the year 2020, these emerging population trends will result in a society where one out of every four people in Japan will be 65 years or older (Japan Insight, The Graying, 1999).

Japan recognizes that this graying population has a far-reaching impact on the Japanese workforce and human resource issues now and in the future. In 1998, the Japanese Ministry of Labor predicted that one in four workers in Japan would be over the age of 55 by the year 2000 (Japan Insight, The Graying, 1999). This fact reflects new corporate changes that include: (1) higher labor costs, (2) fewer senior positions, (3) greater financial demands for severance pay of retirees and pension benefits after retirement, (4) lack of employment opportunities for older employees who want to continue to work, (5) lower mobility for workers, and (6) change in training methods. The retirement age of 55 is changing to age 60 and beyond, and new hiring, training, and retraining methods are being initiated in order to eliminate workforce problems (Japan Insight, The Graying, 1999). Although many traditions and lifestyle preferences of the Japanese work environment remain constant, the increase of older employees in the workforce in the 21st century is definitely creating change.

Problem Statement

Japan's workforce is aging rapidly. Many of these older employees were secure in lifetime employment, a practice long associated with Japan. Employees worked for the same company after graduation from high school or college until retirement. Companies recruited young workers directly from school and directed their careers through in-house training and development programs. Today, as a result of this aging workforce, changes are occurring not only in the lifetime policy, but also in workforce practices and retirement issues. These changes are creating new challenges and redirecting hiring, training, and development programs for Japanese companies. After decades of job security, many Japanese workers are experiencing changes in their employability and uncertainties of job opportunities and career advancement.

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Research Questions

The research considered the following questions:

- What social influences have made an impact on the Japanese workplace?
- What workplace changes are the Japanese older workers now experiencing?
- As the Japanese workforce ages, what human resource development (HRD) and retirement issues are evolving?
- What future work opportunities are available to Japanese pre- and post-retirement workers?

Theoretical Framework

Many Japanese workers are now in the post- or pre-retirement stages of their lives. They have worked diligently throughout the post-War era and have been instrumental in building Japan into one of the world's leading industrial countries. Most have lived through the phase of urbanization that developed with massive post-War migrations from the agricultural areas of Japan to industries and businesses of the cities (Japan Insight, Background, 1999). The lives of this post-War generation of older workers, mainly the men, have been dominated by routines of working many hours a week, commuting long distances to work, and having limited family and community involvement. Although they are eligible to retire or are near retirement, many are active, healthy, and want to continue working ("Population Grows," 1998). Japanese companies are being challenged to decide how older workers can best fit into the workplace and how they can adjust to the transitions of change both before and after retirement.

Methodology

This international study focuses on the impact of aging employees in the Japanese workplace and their transition to changes occurring in the workplace. Several qualitative methods were combined for this investigation. Information on current changes in the Japanese workplace was obtained through literature written in English or translated from Japanese into English.

Case Studies

Case studies involved both in-depth interviews and observations of persons who represented older employees. Discussions spanned a one-year period and focused on their preparation for training or re-training before or following retirement. Each case study offers a viewpoint of personal work habits and future lifetime choices. In addition, the case studies offer a view of lifestyle changes that occur in pre-retirement and post-retirement stages of life. The four case studies in this paper include persons between 55 years to 68 years old. Although a similar focus of discussion topics was used in all the case studies, a flexible format permitted adjustment to differences in interests career experiences, and lifetime transitions.

Interviews and On-Site Visits in Japan

In addition to literature reviews and interviews with case study participants, company site visits in May and June of 1998 afforded an opportunity to meet with a cross-section of employees. During these visits, meetings and interviews were arranged with persons who would soon be retiring or have already retired; with non-retiring, younger employees representing the general views of workplace employees; and with managers from several Japanese companies. Because the majority of Japanese workers are men, most of the interviews were with men.

Results and Findings: New World Influences in the Japanese Workplace

Currently Japanese employees find themselves in the midst of a rapid revolution of technological and social changes that are occurring throughout the world. The course of change includes two major periods in the past fifty years ranging from post-World War II to the present. First, Japan began a high growth industrial period following the war that successfully established the country as a powerful economic world player and a strong competitor in the global marketplace. Incorporated in this industrial period were the factors of mass production and automation, coupled with an intense work ethic based on a philosophy of hard work as the basis of a good life (Naisbitt, 1997).

Second, Japan has now entered into the post-industrial period, also called the information age or the info-sphere (Spear & Mocker, 1989), which is oriented toward services and information technology. As a result, interaction among people has become more important in society. This new society extends far beyond Japanese boundaries. Changes in lifestyles and new social trends are transforming all of Asia with unprecedented speed (Naisbitt, 1997) in this post-industrial era. Because of this evolution, older Japanese are finding that their responses to change are influencing their fundamental work routines and day-to-day lives. The quality of their futures relies on their successful transitions and adjustments to these changes.

Internationalism

Several noteworthy trends have propelled Japan into the international arena. First, as a resource-poor nation, Japan has become one of the most powerful industrial nations in the world. With the importation of raw materials, Japan manufactured products for the strict purpose of exportation. "Made in Japan" became a slogan that created a strong economic base for a post-World War II Japan. As manufacturing increased, the Japanese yen grew stronger and by the 1980s, Japan became immersed in the "bubble economy." Japan's economy flourished as companies made foreign investments and Japanese manufacturers moved production sites to foreign countries (Makino, 1997). However, in the 1990s the economy slowed and new international initiatives have become vitally important for the future of Japan.

The workplace has become more internationally involved. Currently many foreign workers travel to Japan to secure jobs. Along with the influx of foreign workers, there are also thousands of Japanese who are working in other countries as Japanese companies expand (Naisbitt, 1997). Workers have become sophisticated in world issues as they experience different cultural norms and workplace values.

The Information Age

The evolution of the Information Age is characterized by the growth of information technology and communication. The development of the silicon chip, satellites, and computer expertise instigated changes and the expansion of Japanese industries. Japan's manufacturing-based economy has changed to an information-based economy where an organizational system of top-down management may not be as applicable. The information-based society is oriented more toward individual input and the efficiency of each worker (Makino, 1997). Managers, who traditionally are the older and more senior employees, have had to adjust to the wave of information technology or have had to adjust their management approach to a more individualistic workforce.

Most managers previously relied on a support staff to perform the company's communication requirements. Computer literacy was not mandatory for job performance. Now many managers are finding that in order to communicate with clients or staff throughout the world, they must be trained in computer skills. Computer literacy has become a requirement, not a choice. Computer communication is rapidly eliminating past methods of conducting international business via the telephone and facsimiles. Also, senior managers must now apply new management skills to a computer-literate, younger staff. These changes bring more requirements to prepare, train, or retrain the workforce in order to compete internationally and to meet the demands of future jobs. Both the expansion of training programs and the retraining of workers within companies are increasing and more programs are becoming routinely necessary.

Workplace Changes

Older Japanese workers of today were recruited as new employees in the 1960s. They graduated from colleges or high schools and became the workers and salaried employees devoted to the *kaisha*, "the company," throughout their careers. The *kaisha* offered security with lifetime employment and became the pivotal focus of their lives. With this system, the company takes care of its employees and both the employees and the company give total commitment to each other. Dedication is more than contractual; it is also emotional (Narushima, 1995).

Companies that follow the lifetime system provide their own training and career development programs. These programs are focused on contributions the employee makes to the company. The possibility that the worker would ever leave to work for another company is not considered. Following comprehensive on-the-job training, the company gives various assignments as needs arise or positions open. By following this plan, employees become trained in a variety of tasks and also become familiar with the company's total organization.

Besides lifetime employment, other elements of the company's responsibilities include seniority-based wage systems, promotions systems, and enterprise-based union structure. These benefits create an organization that has a dependable, programmed compensation plan; a step-by-step career advancement system; and total dependency of employees on "the company." Long hours of work, lengthy commutes to and from work, and "after hours" socialization among workers are all viewed as part of being loyal to the company and as a means of building social relations that Nakane (1973) refers to as an extended family.

Dramatic changes have recently occurred in the traditional concept of lifetime employment by the *kaisha*. Kobayashi (1996) describes the changes currently occurring throughout Japan as a paradigm shift from the traditional models of organizational structure to a new employability model dictated by today's economic conditions. The prolonged recession of the 1990s and the weakening of the yen have greatly impacted Japanese companies and Japan itself is experiencing new organizational rules. In addition to the changes to service-oriented and information technology-based industries and the role of internationalism, changes are occurring in consumer behavior. Employees are seeking a better quality of life as they seek less work-related daily routines. Change is also seen with the needs of an increasing older working population (Kobayashi, 1996).

Because of these changes, Japanese businesses can no longer continue in the traditional lifetime employment model. Recent graduates of colleges, universities, and high schools cannot depend on lifetime employment. New graduates now persistently search for employment but find fewer jobs are available and part-time or temporary jobs may be their only choice. Many businesses are now organizing with: (1) a core long-term group of employees, (2) a professional specialist group that does not fall under benefits of the lifetime category, and (3) a flexible, or part-time, worker group. In contrast to the lifetime model, companies now have different compensation packages, different plans of career advancement, and more competition. Greater emphasis is placed on job performance, ability, and competence (Kobayashi, 1996).

Middle-aged and older employees are finding that horizontal transferring from department to department may be impossible, and those in upward mobility or career advancement roles find securing managerial positions more difficult, if not impossible. Traditionally, companies created positions for those at a career plateau by corporate growth that created new positions (Suzuki, 1996). However, with the state of today's economy, companies are downsizing rather than expanding. In the 21st century, new company policies affect every part of the organization. Employability and employees' specific skills as they relate to company needs are now crucial factors for permanent employment or advancement.

Issues of Retirement

The aging working population of Japan has a direct impact on changes in the Japanese workforce. Because one in four workers in Japan is over 55 years of age, companies are experiencing: (1) higher average labor costs, (2) a lack of senior positions, (3) financial demands for severance pay for retirees when they retire, (4) financial demands for pension benefits after retirement, and (5) lack of employment opportunities for the older workers (Japan Insight, Graying, 1999).

Companies with subsidiaries often transfer older workers to these firms with the idea that the transferees will serve as a liaison between the company and the subsidiary. However, problems often pass to the subsidiary companies as the transferred employee waits for the formal retirement age (Japan Insight, New Ways to Work, 1999). These employees who come from the parent company are described by the subsidiary staff as "descending from heaven" (*amakudari*) and many times cause frustration if top positions are assumed by these older employees (Suzuki, 1996). On the other hand, many "parachuted" employees have positive experiences in the subsidiary company and often provide significant services for the subsidiary.

Many companies are making efforts to accommodate the older employees. Some older or retired employees are asked to remain as consultants or to assume training or mentoring positions. Others may be rehired, hired on a part-time basis, or designated as a non-regular staff member. Even though their wages and benefits decrease, many retirees find this to be a role they enjoy. At times, companies may assist employees by establishing private businesses, developing training programs for new employees with older employees or retirees serving as lecturers, or contracting with outplacement companies to assist in finding them other employment (Suzuki, 1996).

Many larger companies now encourage early retirement in order to prevent some of these problems. Occasionally companies engage in "shoulder tapping" (*katatataki*) to encourage employees to resign voluntarily. Those who remain may be called "window gazers" (*madogiwazoku*) or "marginal employees" (*genkai shain*). Because they continue on the payroll even though their job responsibilities have decreased, they are considered to be "redundant" (Suzuki, 1996). Retirement or *teinen*, meaning "prescribed years," is a major issue in the workplace for many companies. The *teinen* system refers to age limits that are set by an organization and is a method used mainly by larger companies. Small companies, farmers, and the self-employed may not have the same rules (Campbell & Campbell, 1991). Therefore, a variety of retirement policies may apply.

According to a survey conducted by the Ministry of Labor in 1996, twelve thousand employers reported that 33.5 percent of retirees aged 50 or over had left before retirement age, and 9.3 percent had taken advantage of early-retirement packages. This was twice as many as had retired the previous year (Japan Information Network. Old Hands, 1999).

The establishment of a mandatory retirement age has been a political issue in Japan for years. In the 1970s, the mandatory retirement age of Japanese workers was 55 or younger. In 1980, approximately half of Japanese corporations had 55 as their mandatory retirement age and half had 60. During the 1980s, the older employees expressed the desire or the need to continue to work past age 60. In 1986, the government enacted the Law Concerning the Stabilization of Employment for the Elderly People in an effort to encourage companies to retrain or hire older workers and offered incentives if the mandatory retirement age was raised from 55 to 60. By 1991, 70 percent of the companies had raised their retirement age to 60 or over. Ninety-five percent of companies with over 5,000 employees had initiated the 60 or over policy, but only 67 percent of companies with 100 employees or less had adopted the 60 or over policy.

In 1994, more legislation was enacted and in April 1998, the mandatory retirement age in Japan became 60. This action also brought the retirement age closer to the age when pension payments would begin (Japan Insight, Graying, 1999). Eligibility for pensions will be raised from 60 up to 61 in fiscal 2001, and to 65 in fiscal 2013. Employees who leave work prior to that age will not receive income until they reach the specified age (Japan Information Network, 1997).

Although many older workers look forward to retirement, others regard the pension policy with concern and express a need to continue working. Personal financial requirements are the first and major concern of retirees, but others enjoy working and want to remain active and independent. Overall many retirees do continue to work in some capacity of employment or in "second-chance" careers. Many are seeking educational or training programs to prepare them for employment in a field that may be totally different from their previous jobs. With this expanding number of retirees, adult education programs will become increasingly popular and, more importantly, specifically needed to accommodate the rapidly expanding, older population of retirees.

Case Studies

The following case studies illustrate some of the retirement issues that Japanese workers currently face. They have experienced the post-World War II workplace changes and have varied backgrounds. Many of their experiences have influenced their approach to retirement.

Case Study 1: Lawyer and Company Executive

When Mr. A entered college, he chose law for a career. The main reason he decided to pursue a law degree was to study the actions of people. He found that by observing and interpreting people's actions, he could formulate a psychological study of human nature. He finds the study of people from different cultures and their approach to living particularly challenging to understand. After graduating from Tokyo University with a degree in law, Mr. A became a traditional Japanese businessman who was employed by a company directly out of college and worked for one company throughout his career. Because of this traditional work pattern in the Japanese culture, he never thought about moving or changing jobs or joining another company. He was dedicated to the company throughout his total working career. The company provided him with security, stability, and lifetime employment.

As a participant in this lifelong career system, Mr. A proceeded through the standard steps of advancement and promotions within the company. Exhibiting managerial skills, he assumed a career track that led him into the executive level of the company. During this time period, his only education or on-the-job training came from co-workers or by observation and participation. There were no classes or formal educational programs.

One trait that Mr. A has always had is curiosity. This curiosity led him to ask questions and to want to know more about the total business operations. One specific area was international business. After working for his company for over twenty-five years, he decided to apply for an overseas position in the United States. After being selected for the position, he became a vice-president of the company's corporate office in the United States.

When he first arrived in the United States, he felt he was in a classroom of cultural differences and surprisingly found his English to be much less proficient than he had thought. He began to adapt to the Western corporate environment, American's traditions, business procedures, and cultural differences. After five years as the corporate vice-president, he and his family returned to Tokyo where he assumed his previous position in his company. Upon his return, he recalls he had cultural shock to Japanese workplace culture. Commuting schedules were different, work hours were different, business procedures were different, and dedicated company time was now more demanding. He had to totally readjust to the Japanese workplace cultural environment.

Because of his age, Mr. A changed job positions and was reassigned as a corporate manager to a subsidiary company of his parent company soon after his return. Again, Mr. A found new challenges and did not look upon this time in his life as a "downsizing" time. It was a leveling time; it was a time to look toward the future. Knowing that he would retire at the end of three years from the subsidiary company, he began to make retirement plans. He began an intensive training program to acquire computer skills and to learn about software applications. Mr. A knew that when he officially retired at 65, he would enter a new career. He wanted to work as an international consultant. To do this, he had to be current in all aspects of his profession as well as technology. His international experience offered him choices throughout the world. Currently, Mr. A is working in the United States as a consultant and hopes to remain active in the workplace for several more years.

Case Study 2: Company Manager

Growing up in a small rural village in northern Japan, Mr. B was interested in pursuing a career in business. Through the traditional steps of education, he graduated from college with a degree in economics. Following college graduation, he began the process of becoming an employee in a lifelong employment relationship. Mr. B joined a large Japanese trading company and began a career that involved business management. One of his job requirements involved international travel. When Mr. B was offered the opportunity to move to England to assume a managerial position, he eagerly accepted and felt that this step could lead to more professional advances within his company. At the end of his three-year assignment, he and his family returned to Japan and Mr. B assumed his previous position.

As prescribed by many Japanese workplace policies, he followed gradual advancement in managerial roles within his company. He had an office staff and did not need to use a computer or to learn computer skills. His on-the-job training was through learning the new skills necessary following promotions or advancements. He participated in only a few formal educational programs.

Mr. B will soon retire and expresses concern for many of the issues that he is facing in the near future. He does not want to accept a position in the Silver Society, a Japanese term for old-age status. Some of the issues he is facing involve what to do with his life, how to fill his days with activities that are of interest to him, and how to adjust to being at home fulltime. The last issue is of particular concern because his normal daily schedule has been leaving home early for work and getting home late. He feels that both he and his wife will have many adjustments to make and a need to become reacquainted.

Mr. B is not particularly interested in computers or in learning how to use them. He is interested in golf, but feels the cost is prohibitive in Japan. He does not have many friends in his home community and his work friends are either still working or live long distances away. Because of his work schedule, he has been limited in developing hobbies and presently finds reading to be the most relaxing and satisfactory way to spend his leisure time. He is not sure that participating in either educational or volunteer programs is what he wishes to do immediately upon retirement. Mr. B will retire in a year. His company has downsized his managerial role and he is presently performing in a mentoring capacity for younger employees.

Case Study 3: U.S. Military Employee

Ms. C, at the age of 69, looks forward to new challenges and exhibits a great curiosity for life. Born in Yokosuka, Japan, in 1930, she saw Yokosuka grow from a small naval port town to a suburban city of Tokyo. By 1941, Yokosuka Naval Base was well known throughout the world for shipbuilding, and by the beginning of World War II, this area was a major player for support as a military command center (Thompkins, 1981).

Early in Ms. C's education, her family had other plans for her. Because of her "good brain," she was destined to pursue a formal education in the public schools of Yokosuka rather than follow the typical education of Japanese girls. Her education was influenced by many of the changes made to the school systems under American Occupation. One of the major changes made by the Occupation forces was the elevation in the status of women. Military authorities felt that since Japanese men were working to support their families, the Japanese women were better suited to assist in reconstruction efforts (Thompkins, 1981).

Because of this woman-oriented initiative, Ms. C had a career "door" of opportunity opened for her, an opportunity unheard of for women. She had been a diligent student and had chosen "hard" subjects instead of "soft" studies ("girl-stuff such as cooking") in her education programs. With a talent for languages, she was top in her English class. She was introduced by one of her teachers to an American personnel representative on Yokosuka Navy base. At the age of 20, she was temporarily employed by the base to work in the housing department. Later she was hired to be a negotiator-interpreter for American military staff and families who moved into the Yokosuka area. Because of the lack of base housing, living quarters were often needed off base. Ms. C served as a "go-between" for the U.S. Navy housing office in Yokosuka and Japanese realtors or individuals willing to rent to Americans.

In her early years of employment, this was a difficult job and the position demanded much diplomacy for success because of suspicions between Americans and Japanese. However, through this job, she felt that she was able to learn many things. Although she never obtained a college degree, she was exposed to many learning and educational experiences. She relates, "I learned much knowledge in psychology, communication, and international relations."

Ms. C was one of the few Japanese women at that time who worked in a professional position. She also is one of the few Japanese women who began her career as a young adult and continued working until 1988 when she retired at the age of 58, the mandatory retirement age at that time. Through these years, Ms. C saw many changes in the workplace; however, in her role most were American military changes, not Japanese policies. The military from 1950 to 1988 hired many Japanese nationalists and the workplace environment often was a mixture of cultures. Other changes were use of computers and an increase in the number of women in the workplace. During the discussion of her career, she expressed that the workplace was a part of her life that always required adaptation to change.

Case Study 4: International Executive

Mr. D has had a career transition similar to that of Mr. A and Mr. B. Within the Japanese traditional role of a businessman, Mr. D has followed the lifetime track of education, company employment, company promotions, and career advancement. His personal life has included a college degree, long work hours, little family time, and limited formal or on-the-job educational or training opportunities.

Two differences occur in Mr. D's profile. First, his job required frequent travel and he was away from Japan for many weeks or months throughout his career. He is internationally astute, having been on short-term assignments or recurring travel to many different countries throughout the world. The second difference is that he retired two years ago but is in the "boomerang" position where he is continuing to work for his parent company as a consultant. This trend of rehiring former employees, particularly as consultants in managerial positions, is becoming more visible in Japan.

Mr. D enjoys his new position and, although his hours can still be long and some travel is necessary, the overall demands of his position have lessened and he is able to have more leisure time with his family. Through necessary job-related computer requirements, Mr. D is a novice in operating a computer. He does not discount that improving his computer skills may be an educational option he will pursue when he has to permanently retire next year. He feels that computer literacy is a necessity for everyone in today's business world.

Conclusions and Recommendations

The changes in the Japanese workplace come with challenge. Today's generation of older workers is facing workplace and lifestyle challenges that are different from any previous generation. This Silver Society of Japan, the 55 or older individuals, has worked hard to build the economy after World War II. They are postwar pioneers who have initiated new technology to meet the challenges of the 21st century.

The majority of this generation joined in a postwar exodus from rural surroundings to urban or suburban areas in the cities of Japan. This generation has adapted to Westernized innovations and technology and assisted in establishing Japan as one of the major industrial nations in the world. However, today's workplace is changing. No longer can an employee depend on lifetime employment. The information age has arrived and computer skills are essential for job performance. Internationalism and the global economy have opened the workplace to all areas of the world. Workplace values, competitiveness, and new competencies are evolving.

Change has also occurred with the older and retiring employees. Many older workers are rejecting traditional retirement roles. They are healthy and active and want to pursue new career opportunities, to work part time, or to volunteer in community organizations. Most are more self-reliant than previous generations; they are more affluent and better educated; and they are ready to adapt to a more independent lifestyle.

Change and diversification are key factors in the values and lifestyles of this generation and are apparent in their attitudes. Culturally, many older adults hold fast to traditional concepts and feel that society is changing too fast. They are concerned that the old ways are being cast off too readily. They fear that respect for the elderly and for the wisdom that supposingly comes with age is diminishing among the younger generation. Many feel that society now views older workers or retirees as post-productive individuals who create a potential burden to workplace and to society. With these observation, many express the belief that change is inevitable and that they need to become a participant in society rather than a observer.

Research Contribution

The goal of this research is to enhance and expand the knowledge of HRD by:

- Exploring new trends that are occurring and have developed in the Japanese workplace.
- Contributing to the understanding of changes occurring in the lives of the Japanese older worker.
- Highlighting the challenges and choices of future work for older adults in Japan.
- Generating further research questions on the roles and workplace options for older adults.

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Conceptualizing Global Leadership From Multiple Perspectives: An Analysis of Behavioral Ratings

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Multirater feedback data collected from 264 senior managers, 825 direct reports, 1,001 peers and 264 supervisors of a large global organization in the automotive industry were used to examine the underlying nature of global leadership behavior and self-other ratings agreement. Consistent with prior research, findings suggested the singular importance of having a systemic learning orientation. Other non-standard differences by rater type were evident. Implications of these results for understanding global leadership are discussed.

Keywords: Global Leadership, Managerial Behaviors, Multirater Feedback

The last decade of the twentieth century has seen a number of significant and highly influential changes in the worldwide business environment that have fundamentally altered the form and function of organizational existence. From email to e-commerce, from disk-based to distance-based learning, and from international trade to global economics, it would be hard to argue that we are aware of the full impact of these changes on the process of leading and managing on a day-to-day basis (Chandler, 1994; Galagan, 1990; Rhinesmith, 1996; Tichy & Sherman, 1993). Although there are a variety of interesting human resources related issues that might be explored in this regard, such as the role of the internet in recruitment processes (e.g., Stanton, 1999) or the effect of changing workforce demographics (e.g., Jackson, 1992), one area of particular importance and with specific relevance to the uniquely systemic perspective of HRD and OD practitioners (Burke, 1982; Katz & Kahn, 1978) is the impact of globalization on leadership in this new environment.

What is globalization? Rhinesmith (1996) defines globalization as follows: "To be global, a company not only must do business internationally but also must have a corporate culture and value system that allow it to move its resources anywhere in the world to achieve the greatest competitive advantage" (p. 5). Further, he states that in order to support such a value system, leaders and managers need to develop a broader, more systemic perspective that encompasses attention to such areas as cultural flexibility, systems thinking, change management, and continuous learning (Rhinesmith, 1993; 1996). Although not entirely new, these constructs do represent somewhat lesser explored areas for executive and management development efforts and are therefore probably worthy of further examination.

Of course, this type of systemic perspective is not merely a useful framework in its own right. In today's global economy and marketplace, the process of inspiring and motivating employees to think systemically and across boundaries presents a real challenge, particularly when this takes attention away from the immediate aspects of one's job. Nonetheless, some authors (e.g., Drucker, 1992; Hamel & Prahalad, 1994; Rhinesmith, 1996) have argued that having a global mindset may well be a necessity for the continued viability of an organization. If organizations cannot compete or manage in such an environment they will ultimately ease to exist.

But what do we know about leadership and management in these types of settings? Some interesting initial work has been done linking leadership style (i.e., transformation vs. transactional) to certain sets of global leadership practices among executives. More specifically, based on a sample of 391 executives headquartered in the United States, Church and Waclawski (1999a) found that global leadership consisted of four primary components or dimensions: *systemic thinking*, *relationship management*, *managing change*, and *learning orientation*. When compared with a standard measure of leadership style, it was evident that transformational leaders were seen as being significantly higher on each of the four global leadership dimensions then were those with a more transactional style. Their findings support a number of related theories and approaches regarding the importance of having both a systemic as well as a learning-based perspective when managing others (e.g., Burke & Litwin, 1992; Rhinesmith, 1996; Senge, 1990), not to mention the importance of the process (or people) skills that continue to be overlooked by many in research and practice.

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Although an important early step, questions regarding the global applicability of such findings remain. For example, while systemic thinking and a learning orientation may well be applicable across different cultures and settings, a focus on building strong interpersonal relationships might be expressed and experienced (and therefore perhaps rated) differentially in different types of contexts. Similarly, the behaviors comprising the managing change factor in this prior study reflected such actions as being proactive, open to and accepting of changes, clearly communicating reasons for change and providing support to others, which do not appear to reflect management styles in other less individualistically oriented countries (Hofstede, 1980). More research is certainly needed, and with different types of samples in this area of study in order to improve our understanding of the fundamental and consistent facets of global leadership behavior and their impact on managerial performance.

The same argument, of course, can easily be made regarding the need for ratings research using non-U.S. based samples. While numerous published studies now exist that examine feedback from multiple sources (e.g., Church & Waclawski, 1999a; 199b; Furnham, & Stringfield, 1998; Nowack, 1992; Mount et al., 1998), relatively few authors have focused on more diverse populations such as those from truly globalized firms. Thus, while we are quite familiar with self-other ratings trends (e.g., over-rating) and low levels of agreement among standard populations, these patterns have neither been confirmed nor disconfirmed with other types of populations.

The purpose of the following study is to address these needs in the literature by presenting an applied analysis and potential replication of the structure and relationships among behavioral ratings-based data collected from a set of senior leaders (and their direct reports, peers and supervisors) in a global organization headquartered in Japan. By relying on data from a truly global organization, it will be possible to advance the field of global leadership study by providing a comparison of leader behaviors with those from prior research samples. In addition, the nature of the self-other rating relationships will be explored relative to those exhibited in more traditional populations.

Method

The following study was based on data collected for 268 senior level managers from a large global organization in the automotive industry with its corporate headquarters in Tokyo. Representative of its global operations, these managers were stationed throughout the world including the following countries: Australia, Azerbaijan, Bangladesh, Belgium, Brazil, Canada, China, Colombia, Ecuador, Germany, Guatemala, India, Indonesia, Italy, Japan, Korea, New Zealand, Philippines, Poland, Portugal, Russia, Singapore, South Africa, Sweden, Syria, Taiwan, Thailand, United States, and Venezuela. Given the extreme diversity of location, however, no single country represented more than 5% of the total. Although the sample was comprised primarily of senior level managers (i.e., country heads) in this organization, due to the cultural sensitivity of the rating process in the present setting, no demographic questions were asked on the ratings form, thus these data (e.g., gender, age, tenure, etc,) were not available for possible moderator analyses.

In total, leadership ratings were collected from 264 focal managers (self-ratings), 825 direct reports ($\underline{M}$ = 3.33, $\underline{SD}$ = 1.55), 1001 peers ($\underline{M}$ = 3.78, $\underline{SD}$ = 1.52), and 264 supervisors. Since all focal managers were instructed to distribute 6 direct report and 6 peer forms each, these data represent response rates of 51.3% and 62.3%, respectively. These figures are somewhat low compared with prior studies of senior level populations (e.g., Church & Waclawski, 1999a; 1999b), which may reflect culture differences with respect to response tendencies (e.g., most report ratings research samples in the literature are typically heavily biased toward individuals located in the United States). Almost all participants and their supervisors, however, did respond to the assessment process (98.5% for both rater groups).

All behavioral ratings were collected in conjunction with a multirater feedback-based executive development initiative designed to enhance the leadership skills of those attending. A process frequently used by practitioners for a variety of developmental and appraisal purposes (e.g., Antonioni, 1996; Bracken, 1994; Church, 1995; Church & Waclawski, 1999b; McLean, 1996; Tornow, 1993; Van Velsor, Taylor Leslie, 1993), multirater feedback provides a number of opportunities for research as well. The results were delivered in the form of individual feedback reports in an offsite setting by experienced facilitators, which is common in these types of feedback-based efforts. Since the assessment process was intended to be developmental in nature, all instructions, instrumentation and follow-up procedures stressed the confidentiality of the process as well as the standard protections associated with reporting procedures (e.g., no data are provided unless 3 or more responses were received from direct reports and peers). This approach was taken in order to enhance the validity and utility of the data obtained (Bracken, 1994; Church & Waclawski, 1998; Harris, 1994; Ostroff, 1993).

The measure used in this analysis was a 27 item instrument designed to assess various elements of global leadership in the present organization. Although a few of the items were specifically created and/or modified for this setting, the majority were chosen from a larger set of practices (and many from a related global leadership instrument) that have been used successful with other organizations and samples. The HR function of the organization and an external consulting firm were actively involved in the development of the instrument. All items were positively worded and rated on a 1 to 5 extent scale, where 1 = to a very small extent, 3 = to some extent, and 5 = to a very great extent. Averaged direct report and average peer ratings were used for all analyses since these represent a closer approximation to the true score for a given behavioral set (Nunnally, 1978). Overall, the internal consistency for the total instrument (i.e., for the summary scores) was strong, particularly since these were only 27 items in total, ranging from a low of .83 for self-assessments to a high of .96 for direct reports.

Although not a central component of this research, in order to compare data from this sample with other studies, self-direct report ratings congruence—an operationalization of the construct of managerial self-awareness (Church, 1997)--was also computed. This was done using two different methods: (a) the collective level of agreement between senior manager and average direct report ratings using a standard index of profile similarity *d*, (e.g., Church, 1997; Church & Waclawski, 1999a; 1999b; Nunnally, 1978; Tisak & Smith, 1994); and a four-group categorical agreement method (e.g., Church, 1998; Church & Waclawski, 1999a; Yammarino & Atwater, 1997) whereby participants are classified as under-raters, lower performing accurate-raters, higher performing accurate-raters, or over-raters based on a comparison of total scores.

Results & Discussion

First, analyses were conducted using total scores for all 27 items to explore basic ratings effects for this sample by perspective. Table 1 provides an overview of the descriptive statistics and correlations for the summary scores and self-direct report difference score. In general, these correlations were actually quite consistent with prior ratings research (e.g., Church, 1997; Church & Waclawski, 1999a; Harris & Schaubroeck, 1988; McLean, 1996) with low to moderate correlations among various rater groups. Thus, it would appear that typical ratings effects reported in other studies are consistent across the present global context as well.

Table 1. Descriptive Statistics for Summary Ratings

	M	*SD*	*Self*	*Direct Reports*	*Peers*	*Supervisors*	*S-D Profile Similarity*
Self	3.69	.46	*.83*				
Direct Reports	3.82	.47	.26**	*.96*			
Peers	3.73	.44	.23**	.22**	*.95*		
Supervisors	3.76	.55	.16*	.09	.15*	*.90*	
Self-Dir Profile Similarity	0.92	.30	-.44**	-.11	-.18*	-.01	

Note: * $p < .05$, ** $p < .01$, reliabilities are printed on the diagonal

The only finding of particular note among the correlation matrix was the fact that self-direct report and self-peer relationships were generally higher ($r = .26$, $p < .01$ and $r = .23$, $p < .01$, respectively) than co-worker correlations (e.g., direct report-peer, direct report-supervisor, peer-supervisor). This is considerably inconsistent with prior research and meta-analytic findings (Harris & Schaubroeck, 1988) where other-other rating correlations are almost always higher than similar self-other values. While it is impossible to know for certain why this trend occurred, one strong possibility is the impact of cultural differences between samples—i.e., perhaps the managers in the present global organizational setting reflect a slightly more collectivist orientation (Hofstede, 1980) than those from prior research, most of whom were based primarily in the United States. If such were the case, however, one might expect the self-other correlations to be even stronger than those reported here, which were typically low overall. Nonetheless, there would appear to be a somewhat different pattern emerging here, particularly given the lack of significant relationship between direct report and supervisor ratings.

Another interesting difference inherent in the present dataset was the fact that these senior executives actually tended to rate themselves significantly lower than did their direct reports ($t = 3.71$, $p < .001$), reflecting the possible presence of a modesty bias of some sort. Although supervisor and peer ratings were also higher in value among the present sample than were self-assessments, these differences were not statistically significant. The former pattern, however, is again atypical among datasets based on samples of managers from the United States (e.g., Church, 1997; Church & Waclawski, 1999a; 1999b; Nowack, 1992; Van Velsor et al., 1993), the United Kingdom (e.g., Church, 1998), and even Australia (e.g., Carless, Mann & Wearing, 1998). In fact, the standard ratings pattern is almost always the opposite—i.e., self-ratings are the highest, followed by almost any group other than direct reports.

Finally, while the value of the profile similarity as calculated among the present sample was not particularly unusual (i.e., reflecting an adequate but not superior level of managerial self-awareness as compared with prior samples), it was interesting to note that self-direct report agreement was entirely unrelated to supervisor assessments. In other words, increased levels of self-direct report agreement (without attention to level) were not directly related to supervisor assessments.

Next, in order to examine the underlying structure of the global leadership behaviors assessed and to be able to compare it at the construct level with prior theory and research, a Principal Components factor analysis was conducted using the averaged direct report ratings. This source was used because presumably the direct report perspective more than any other would most accurately reflect leadership style as opposed to those directed more at political (e.g., supervisors) or competitive (e.g., peers) ends. Three factors emerged from this analysis, which accounted for 60.2% of the total variance. Table 2 provides a description of each of these factors.

Table 2. Summary of Global Leadership Factors

Factor Label	Item Content Description	Items	% Var
Systemic Learning	Discusses on-going changes in the global market; facilitates the sharing of global resources and skill sets; discusses current activities and events taking place throughout the organization; emphasizes global teamwork; identifies best practices elsewhere in the organization and learns from them; monitors and communicates global issues; promotes understanding of diverse business activities and customers; promotes constructive discussions regarding how to maximize potential	12	45.9
Cultural Awareness	Is sensitive to differences when dealing with people from different cultural backgrounds; considers the impact of each individual's cultural background when managing cross-cultural teams; demonstrates an awareness of cultural issues when working with others; adjusts the way he/she communicates to take account of cultural differences; understands the impact of his/her cultural background and the values it represents when working with others; considers the impact of cultural differences before approaching situations	8	8.9
Problem Solving	Searches for answers to complicated situations rather than waiting for advice; thinks beyond the immediate context of a problem to achieve creative solutions; manages risks wisely in resolving complex issues; identifies and implements improved ways of serving customer needs	7	5.3

Interestingly enough, the factor reflecting a systemic learning orientation (with managerial behaviors focusing on marketplace analysis, utilizing best practices, identifying skill sets, and improving teamwork and integration) accounted for the overwhelming majority of variability explained across all direct report ratings (45.9%) despite taking less than half the total number of items on the instrument. The prominence of such high level systemic issues and concerns among these senior managers is consistent with prior research on global leadership using more typical samples based (Church & Waclawski, 1999a). However, it is important to note that the systemic thinking and learning orientation dimensions, which were distinct in the U.S. sample, factored together as a single construct here.

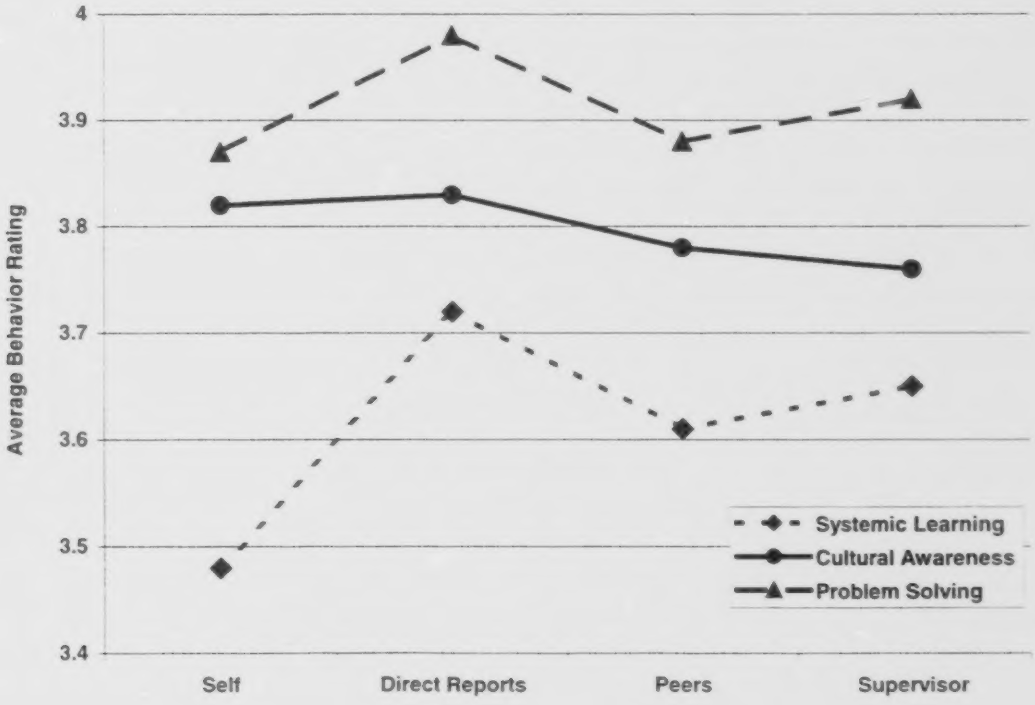
The second factor to emerge from the PC analysis was comprised of behaviors reflecting an attention to cross-cultural differences among various individuals. Although somewhat different in orientation than the more general relationship management component identified in other samples (Church & Waclawski, 1999a), it does make sense that acumen in this area would be important when working with various types of interdisciplinary and culturally diverse teams. Of course, given the somewhat varying item content between the two studies, the differential nature of this factor may simply be a more global reflection of the need for relationship management skills in more traditional leadership and management contexts. In other words, being effective at interpersonal relationships in a global setting probably translates to being aware of cultural differences and how these manifest in work and team settings.

Finally, while the third and final factor--problem solving--identified here is not an exact match with prior research, the behavioral emphases on being proactive and improvement orientated do correspond, at least to some extent, to behavioral content of the *managing change*, and portions of the *learning orientation* dimensions (e.g., solutions and risk) from the U.S.-based research. Thus, although not identical in structure, these components are at least moderately consistent with prior factors and theoretical elements of globalization discussed elsewhere (Church & Waclawski, 1999a; Rhinesmith, 1993; 1996). In sum, there would appear to be some significant consistency across the different types of samples regarding the need for a more systemic thinking and learning perspective among global leaders. There was also some degree of overlap regarding the importance of relationships skills and being proactive with respective to problem solving situations.

Although the similarity in findings regarding the underlying nature of global leadership is important in general, the emergence of a primary factor regarding systemic learning across studies should be particularly encouraging for two reasons. First, from a research and practice perspective, this consistency would suggest that efforts directed at enhancing systemic learning skills for future global leaders should be of significant value almost regardless of context. Second, while OD and HRD theory has long been grounded in an open systems perspective (e.g., Burke & Litwin, 1992; Katz & Kahn, 1978; Rummler & Brache, 1990), research that supports this contention at the individual behavioral level should be helpful for future practice as well. All too often, for example, consultants and practitioners are faced with client mindsets from leaders, managers and even internal HR personnel that are far too micro in focus. By demonstrating that one of the key leadership skills for the future is in fact a systemic mindset, new opportunities for organization development and improvement may be opened.

Next, in order to explore differences in the three leadership factors by rater type, subscales were created for each of the four perspectives (self, direct report, peer and supervisor) for additional analysis purposes. ANOVA results for subscale scores by rater type revealed significant effects, however, for the systemic learning factor only F (3, 1037) = 8.12, $p < .001$. Once again, lower than usual self-ratings were responsible for the majority of significant effects, although Scheffé comparisons also indicated that direct report ratings were significantly higher than others' ratings. Moreover, based on the pattern of means (see Figure 1), it would appear that ratings on the systematic learning dimension were responsible for the more general findings observed at the summary score level, given the lack of differences by type on the other two dimensions.

Figure 1. Subscale Means by Rater Type



Although this finding should not be particularly surprising given that the systematic learning dimension did account for the majority of the variance explained in (direct report) ratings, it was interesting nonetheless to see this aspect of global leadership driving the results. Moreover, post-hoc comparisons indicated that mean scores on this dimension were significantly lower, compared with ratings on the other dimensions across all four rater types.

The final set of analysis regarding the level of managerial self-awareness was conducted using the four category method of agreement (Church & Waclawski, 1999a; Yammarino & Atwater, 1997) and was relatively straightforward in nature. Based on a comparison of self and direct report mean scores and variability, senior managers were identified as belonging to one of four groups—i.e., under-raters, accurate lower performing raters, accurate higher performing raters, and over-raters—which were then used for additional analyses. Simple ANOVA results of mean ratings and profile similarity scores and average item differences (added solely for interpretation purposes) indicated typical significant results by groups (see Table 3).

Table 3: Results of Four Category Agreement Method

	N	% Response	Self Ratings	Direct Report Ratings	Profile Similarity Index	Average Item Difference
1. Under-raters	75	30.7	3.30	4.09	1.16	-.78
2. Accurate lower performing raters	51	20.9	3.54	3.61	.81	-.07
3. Accurate higher performing raters	49	20.1	4.04	4.20	.70	-.16
4. Over-raters	69	28.3	3.98	3.44	.97	.54
Significant Scheffé Group Comparisons			4,3,2 > 1 4,3 > 2	3, 1, > 2, 4	1 > 2,3,4 4 > 3	4 > 1, 2, 3 2, 3, > 1

For example, while self and direct report ratings differed significantly by group (as would be expected given the computations involved), peer and supervisor ratings did not yield significant effects in this regard. Thus, as with the regression results involving the profile similarity index, self-direct report levels of agreement (or disagreement) had little relationship among the present sample to assessments given by peers or supervisors.

The only other finding worthy of note here is in the comparison of the present values of the profile similarity index with those from prior studies. More specifically, while prior research using the three and four group methods often reveal over-raters to have the largest levels of item discrepancy and under-raters to demonstrate very similar (and sometimes not significantly different) levels of self-awareness when compared with the accurate-rater groups, the present actually data show the opposite pattern. For these senior managers, the under-raters represented the most significantly different, and therefore least self-aware group, while over-raters were much closer to the accurate individuals. Moreover, the self-ratings for the under-rating group were particularly low relative to what might be found in other studies. Thus, these differences might suggest that the population studied may indeed be somewhat different in the level of self-perception and assessment behavior.

Summary & Limitations

The purpose of this study was to explore and potentially replicate the nature of the relationship of global leadership ratings from multiple sources, using a more culturally diverse and global sample of senior managers than has been seen in prior research of this nature. In general, the results discussed above would suggest that the nature of global leadership is relatively stable across different organizational samples and settings. While the factors varied to some extent in the present study, there was considerable consistency regarding the importance of the underlying structure of the systemic learning component. Moreover, relationship skills (particularly one's relating to working with individuals and teams from other cultures) and taking a proactive rather than reactive stance appear to be key aspects of global leadership as well. Clearly, in terms of implications for HRD and OD, it is useful to note that all three of these areas are quite familiar to practitioners and well suited for future initiatives and development efforts directed at global leadership. Finally, while there were some interesting differences in the present sample with respect to behavioral rating trends (e.g., lower than normal self-assessments, higher than average self-other correlations), none of these were so unusual as to suggest truly unique interpretations. In sum, the results of this study point to the existence of more similarities than differences in leadership across the global business environment examined here.

The following research does have several limitations, however, which should be noted. First, senior managers from only one organization was studied. Moreover, due to confidentiality concerns among the individuals responsible for the feedback process, very little demographic information (beyond location) on these individuals was available, making moderator and grouping analyses impossible. Although by and large demographic variables such as gender, age and tenure do not typically yield major moderating effects (e.g., Church & Waclawski, 1999b), it is still useful to have these available for analysis and comparative purposes. Further research using other samples is required to determine whether or not the issues discussed here will apply equally well to global leadership in other firms, industries, and contexts.

A second limitation of this study concerns the sample itself. Participation in the assessment process was tied to attendance in a feedback-based development program. Aside from the inherent difference in the nature of ratings obtained for development vs. appraisal purposes (e.g., Antonioni, 1996; Bracken, 1994; Church & Waclawski, 1998; McLean, 1997), this situation may also have implications for generalizability for other samples with respect to potentially greater levels of feedback seeking interest and motivation to change on the part of some individuals. Although participants were selected for participation by senior leadership and the vast majority of senior managers in this corporation were involved in the process, there may still be some biases present.

The third major limitation concerns the nature of the instrumentation used. Although based on prior theory and research on global leadership (Rhinesmith, 1993; 1996) and tested with other samples (Church & Waclawski, 1999a), it is always important to remember that the content of the measurement tool itself defines the nature of any results obtained. Thus, a different set of items pertaining to a competing conceptualization of global leadership, for example, might have produced divergent results. Perhaps some other unmeasured concept, such as the ability to motivate and inspire others, for example, is even more significant for global leadership than having a systemic learning orientation. Similarly, questions reflecting some other construct or skill set entirely would most certainly yield a different factor pattern, though the trends among rater types observed here might well be similar. As with most research efforts, further work is required before conclusions of any sort can truly be offered.

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Comparing Managerial Careers, Management Development and Management Education in the UK with the US: Some Theoretical and Practical Implications

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This paper explores some of the issues surrounding changing patterns of managerial careers, management development and management education in the UK and the US. It addresses three lines of questioning: the new rhetoric of careers in the new economy, the evidence on changing organizational forms and the implications for careers and management development and education, and the future of management education and the role of business schools. The contribution of this paper is a "think piece" and it acts as a backdrop for a comparative study of management development in Scotland and California currently being undertaken by the authors.

Keywords: Management, Careers, Education

The poor state of management development in the UK was recognized as a major contributory factor in the lack of progress of the UK economy during the 1980s (Constable McCormick, 1987; Mangham & Silver, 1986), especially in comparison to major international competitors which included the US (Handy, 1987). Although there are signs that progress has been made in terms of the quantity and quality of management development and education in the UK (Thomson, Mabey, Storey, Gray & Iles, forthcoming), there is little systematic evidence of how the UK is currently doing in comparison to major economies, especially evidence that is up-to-date and reflects on past and current practice. For example, the most recent and as yet unpublished work in the UK (Thomson, Mabey, Storey, Gray & Iles, forthcoming) , whilst otherwise excellent, does little more in its introductory chapters than provide a brief summary of the characteristics of different national systems and provides little or no empirical evidence or pointers from which the UK could learn. It is against this background that we wish to explore some of the more recent issues that impact on management development and education in the UK and US so that we can ask more relevant questions during our forthcoming empirical investigation.

Thus, in this paper, which provides the background to work-in-progress on a comparison of management development in Scotland and California[1], we address three, related lines of questioning:

1. What do the experts say about changing patterns of managerial careers and management development in the US and UK?
2. Is there any substantive evidence of changes in organizational forms that would support the rhetoric on changes in managerial careers and management development in both countries?
3. If, so what are the implications for management educators and developers and the business schools?

What's New? Changing Patterns of Managerial Careers

Our review of the mainly-US literature on careers has pointed to major changes in rhetoric, in which researchers have pointed to new "boundaryless", "protean" and "cellular" patterns career patterns and orientations (Allred, Miles & Snow, 1996; Arthur, Inkson & Pringle, 1999; Hall & Moss, 1998) accompanying major organizational changes, most notably the end of internal labour markets and the "old deal" (Cappelli, 1997, 1998).

There is not the space to review the new deal literature in full (for an outline and critique see Dunford, 1999; Herriot, Hirsh and Reilly, 1998; Roehling, Cavanaugh, Moynihan & Boswell, 1999)[2]. However, a

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[1] The study has been sponsored by the new Scottish Council for Management Development and Enterprise who are seeking to gain an insight into practice in Scotland. This body has been charged with facilitating a national management development strategy for submission to the new Scottish Parliament.

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significant line of the argument is that market and organizational changes have occurred during the 1980s and 1990s in the US and the UK (see Gallie, White, Chen & Tomlinson, 1998) but organizational career philosophy has yet to catch up in all but those most "enlightened" organizations which are attuned to current and future trends (Arthur & Rousseau, 1996; Rousseau & Arthur, 1999). In its more extreme from, this is sometimes referred to as the "end of career thesis" or "boundaryless career"; in a less apocalyptic version it is the essentially normative argument concerning the new transactional contract or new deal of employability currently being offered by some employers. For example, the UK researchers, Adamson, Doherty & Viney (1998), have recently argued that "Most organizations are now talking not of opportunities for advancement and/or progression but of opportunities to improve *marketability* and *employability* (their emphasis)" (p. 255). They outlined key changes in career philosophy that were predicated on the break-down in long-term employer-employee relationships and future time orientation of careers. Thus, they foresaw that career progression was no longer likely to involve upward hierarchical movement in the one organization but is more likely to involve lateral development. They argued that, given the current economic and competitive climate, "from both the organizational and individual perspective, in is no longer so apparent how a logical, ordered and sequential career might evolve" (p.255). Thus, as can be seen, the metaphors underlying much of this line of argument is of balancing "agency" (individual and organizational freedom of choice) with "community" (social relations) (Rousseau & Arthur, 1999) and of "career lattices" (Thomson, Mabey, Storey, Gray & Iles, forthcoming) or "jungle gyms" (Gunz, Jalland & Evans, 1998) in which individuals scramble over "upwards, sideways, downwards, diagonal, or in any direction that the jungle gym allows" (p. 22).

Echoing Handy's (1989) comment that lifetime employment represents "bad economics and bad morals", much the same argument has been put forward by Cappelli (1997; 1998) in the US, who has argued that the "old deal" and the recent attempts by some well known US firms to recapture its features was in complete *denial* of the current market situation in the "post re-engineering era". This strategy, at least according to Cappelli, was unlikely to succeed and may even result in companies, particularly those which operate in knowledge-based industries, losing out in competitive labour markets.

A common theme in these works is of managers requirements to display "career resilience" and to participate in the management of their careers by taking greater responsibility for their learning to make themselves more employable (Thomson et al., forthcoming; Waterman, Waterman & Collard, 1994). For example, Hall and Moss (1998) have argued that the myth of old style organizational career contracts in the US is dead (and, in effect only applied to about 5% of the workforce). Instead, they offer the concept of the "protean career" (see figure 2) in which:

> "...the person, not the organization, is managing. It consists of all of the person's varied experiences in education, training, working in several organizations, changes in occupational field, etc. The protean person's own personal career choices and the search for self-fulfilment are the unifying or integrating elements in his or her life. The criterion of success is internal (psychological success) not external" (p. 25).

So Much for the Rhetoric: What about the Facts?

Thus, as we can see, the rhetoric implicates organizations in some radical and substantive adaptions to the New Economy, which, in turn, have impacted on managerial careers and management development in particular ways. In the context of this comparative study, however, at least two questions need to be addressed. First, are there likely to be some substantial and lasting differences between the US and other countries such as the UK in their responses to environmental changes? On this point, as Lewin (1999, August) made clear, it is no longer good enough for researchers and managers to continue to believe that US organizations act as a model for the rest of the world: that may have been the case in the 1950s when the US accounted for 75% of global economic activity but is certainly not the case when the US accounts for less than 17%. Second, how widespread and substantive are these in the US and the UK?

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[2] Although Herriot et al. (1998) have pointed to various forms of new deals, Roehling et al., (1999) have undertaken content analysis of the academic and practitioner literature to show that there is agreement, at least at a general level, on what constitutes the "new deal".

Figure 2. The Protean Career Contract (Source: Hall, D. T. and Moss, J. E. (1998) The new protean career contract. *Organizational Dynamics*, Winter, 22-37)

The career is managed by the person, not the organization	The ingredients for success change from: • know how to learn how • job security to employability • organizational career to protean careers, and • from "work self" to "whole self"
The career is a lifelong series of experiences, skills, learnings, transitions and identity changes (career age not chronological age counts)	The organization provides: • challenging assignments, • developmental relations, information and other development resources
Development is: • continuous • self directed • relational, and • found in work challenges but is not necessarily formal training, retraining or upward mobility	The goal is psychological success

In attempting to answer both questions together, there are some indications of differences between the two countries from research into their respective career literatures.. For example, Hall & Moss (1998) have raised doubts as to whether the US was ever characterised by an old deal. These authors have suggested that no more than 5% of US firms were responsible for the traditional picture of careers, thus implying that researchers, in setting up a dualism, have created something of a "straw man". In the UK, researchers have been more sceptical of "breaks with the past". For example, Guest & Conway (1998) have pointed to a much greater sense of stability in careers. On this issue, recent large-scale survey evidence (Gallie, White, Chen & Tomlinson, 1998) highlighted some paradoxical findings that have relevance to our discussion. On the one hand there was clear evidence that (a) employers had been investing more in training and development over the last five years, (b) that employees perceived that their jobs required more skills and (c) that they have received more training than five years ago. This finding was particularly connected to the widespread adoption of new technologies (p.292). On the other hand, one of the most notable of their findings was that employees were less likely to *believe* that their future careers lay in their current organizations, especially given the evidence of de-layering and lack of career promotional prospects in their organizations.

By far the most convincing evidence, however, comes from impressive research by Andrew Pettigrew and colleagues on a world-wide study of corporate re-structuring and new forms of organizing[3] (for some early indications see Ruigrok, Pettigrew, Peck & Whittington, 1999). This work does not provide a much support for the "end of organization" and "end of traditional career" assumptions underpinning the new career literature. At recent conferences, Pettigrew (1999, August; Pettigrew & Whittington, 1999; September, 1999) presented the early results of a large-scale, longitudinal project involving international collaborators from Europe, the US and Japan. The aims of the research were to (a) map the extent of changes in new organizational forms in Europe, Japan and the US with surveys of large scale and middle sized employers, (b) assess the effects on performance of these change, and (c) examine the processes involved in changing from one form to another. They defined changes in organizational forms to mean *changing structures* (e.g. de-centralizing, de-layering, project organizations), *changing processes* (vertical and horizontal communications, investment in IT and investment in novel forms of human resources) and *changing boundaries* (down-scoping or de-diversification, outsourcing and development of strategic alliances). Among the key questions which they addressed were (a) to what extent was there convergence in Europe and between Europe and the US[4], (b) were there any contingencies such as country effects or knowledge intensity of firms or industries, and (c) were changes *supplementary* to existing organizational forms or were they *supplanting* traditional organizational forms, as implied by the more apocalyptic tone of the literature discussed in the previous section of this paper?

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[4] The US results have yet to be analyzed.

The early findings on country effects suggested that there was indeed a common direction of change but from different starting points and that there were variations in the pace and depth of changes in different kinds of firms. In Europe, flatter, decentralized more fluid forms were emerging but the directions and movement varied. There was a large growth in project forms of organizing between 1992-96 and evidence of process changes in terms of investment in horizontal linkages. These changes, however, had to be seen in a context of equally large changes in vertical linkages. Thus they found evidence of a number of dualities, including simultaneous investment in building networks *and* hierarchies but no real evidence of destroying hierarchy (largely because of the importance of performance cultures). To make these more complicated but flatter structures work more effectively, there was evidence of large-scale investment in IT. There were also widespread changes in boundaries with outsourcing particularly prevalent. The trends on de-diversification, however, were much more complex, with little evidence of net de-diversification and a movement into the middle (e.g. conglomerates divesting themselves of some peripheral businesses whilst single product firms were diversifying). Thus, the general picture in Europe was of widespread but not revolutionary changes in which firms, as you would expect, were supplementing rather than supplanting their existing structures. Interestingly, these researchers also found that change in Japanese organizational forms was much slower and less widespread than in Europe, a feature explained by the relative success of Japanese companies during the 1980s and early 1990s.

Pettigrew and his colleagues analysis of these results has produced some interesting conclusions and some important lines of future enquiry for management development and education First there are some important country differences, a finding that is borne out by some early work by Lewin and his colleagues (1999, August). Second, internationalization seemed to be positively related to decentralization and the formation of strategic alliances, whilst the use of project organization, downscoping and strategic decentralization was related to knowledge intensity. Finally, high performance organizations were found to be those that innovated in the three areas of structure, processes and boundaries in a complementary fashion whilst negative performance was found to have been associated with small-scale innovation in only one area (Pettigrew & Whittington, 1999, September).

The conclusion that changes in organizational forms in Europe had been supplementary rather than transformative is echoed by what is probably the best and most recent large-scale survey evidence on trends in managerial careers and management development in the UK by a team of Open University researchers (Thomson, Mabey, Storey, Gray & Iles, forthcoming). Their data, which is based on a survey of AMBA graduates and a survey of more than 500 companies, addresses many of the issues that have been referred to above. Their main conclusions point to a marked degree of variation among companies in their adoption career planning for managers, existence of policies on management development such as succession planning and fast tracking etc. However, there was no strong evidence that companies had abandoned internal labour market polices and their responsibility for developing managers. Nor, from the survey of Association of MBA graduates, was there a widespread feeling that these managers had taken on board the complete responsibility for the own development, although there was some evidence of the emergence of protean and cellular careers. Instead, these researchers have characterised the position in many UK companies as resembling a partnership model, in which both parties accept responsibility for management development.

So What? What are the Implications for Management Development and Education

In line with this less apocalyptic evidence of changes in Europe and, one suspects, the US if we leave aside the arguably, over-hyped knowledge-based sectors of Southern California, Boston and North Carolina, it appears that changes in organizational forms and accompanying career structures are emerging, albeit more slowly and less obviously than the new rhetoric on careers would suggest. Moreover, these changes are broadly in line with a greater degree of (and need for) career resilience and self-development among managers. Thus, while accepting that some companies do take on a degree of responsibility for managing careers, Thomson et al (forthcoming) concluded that, for UK managers, "the psychological climate has changed (and) that managers are losing their sense of their companies as being the career anchors to which they attach expectations of on-going support".

The emergence of protean career orientations, networking and cellular career structures have significant implications for management development, management educators and for those interested in learning transfer. For example, as Allred, Miles and Snow (1996) have pointed out, the competencies required for the future will be different from those in traditional organizations and will involve:

- Knowledge-based technical specialities, involving managing oneself as well as managing others and greater computer literacy,
- Cross-functional and international competencies,
- Collaborative leadership competencies,
- Self-management skills, and
- Personal competencies such as flexibility, integrity and trustworthiness.

Moreover, as Rousseau and Arthur (1999) have argued, firms will need to pursue agency strategies (respect for individual interest and choice) as well as community (mutual support and collective adaption) strategies. These might include offering (a) choices to individuals in designing their employment terms, jobs and career patterns to give them more discretion, and (b) designing employment terms and career opportunities that maximise employees' external, as well as internal, visibility. In doing so, they enhance individuals' employability and thus may well become *employers of choice* (Cappelli, 1998).

What of the Future?

On both sides of the Atlantic there have been serious reflections on the future of management education and the role of university business schools in providing support to managers, particularly if they remain committed to a Mode 1 style of learning, e.g. a focus on knowledge produced by scientists for scientists, university-focused, discipline-based and validated by peer review (Gibbons, et.al, 1994). For example, Huff (1999) at an address to the British Academy of Management and Argyris (1999) have queried the ability of UK and US schools to meet the challenge of the new Mode 2 learning, which is characterised by "knowledge for application", is transdisciplinary, group-based, is validated-in-use and is time critical. In a similar vein, at a recent Academy of Management symposium on the future of management education (Weick, Mintzberg & Senge, 1999, August), Karl Weick made the following points that management educators may find worth reflecting on. His argument was that if we accept some of the previously-discussed rhetoric and assumptions made about the changed nature of organizations and management in the 21st century, managers will require a different set of competencies and a very different response from business schools.

Assumptions about management in the 21st Century (Weick, 1999)

- Managers will approach the limits of their capacity to take on new information created by changing conditions and will suffer from overload. They will need to be roughly right and fast.
- Faster change produces weaker situation, thus values and individuals will become more important.
- Information processing is going to produce increased ambivalence. Paradoxically, more information is going to mean that people are less able to act.
- Signals of disaster are going to occur more quickly but they will be weaker and more ambiguous.
- Macro-organizational assumptions and corporate values may decline in their appeal. Although there will be larger alliances, there will also be more emphasis on gifted individuals, protean and boundaryless careers, entrepreneurs, etc.

These assumptions, as Weick argued, imply that management will be more about perception and exception; less about long-term vision and strategies because of the rapid pace of change and more about situational awareness, e.g. projects, and managing in particular contexts. Broadly in line with Allred, Snow and Miles' (1996) speculations on the future of managerial careers, Weick offered a series of modules and issues that managers might find useful to learn about in the future. Interestingly, few of these modules and issues form part of the curriculum of most UK and US business schools.

Manager Education for the Future

1. The dynamics of trust to enable more effective collaboration in larger strategic alliances
2. Collective enquiry and situational awareness to improve early diagnosis of increasingly weak signals of change
3. The craft of practitioner research to deal with the needs of knowledge creation and learning to learn
4. The limits of human functioning, so that people can identify the cues of breakdown through stress, etc.
5. Speaking up to power so that bad news can travel fast and in an upwards direction
6. The skills of disengagement, so that people can get in and out of projects fast

7. Updating skills to help people seek and deal with disconfirming information
8. Listening skills

Interestingly, both Weick's (1999, August) and Huff's (1999, September) advice to the business schools appears to be: "do not to attempt to compete on Mode 2 territory". Huff believes that university business schools do not have the resources to match the large consulting firms or corporate universities that are and will continue to dominate Mode 2 knowledge creation and learning in the future. Instead, as Weick argued, business schools should help managers deal with the increasingly unknowable world by preparing them to see how vested interests work, the universality of vested interests and power in organizations, and to speak up and, if the need arises, to act out alternative interests. As situations weaken and the world of business and organizations becomes more idiosyncratic and pluralistic, the number of "real worlds" will increase: thus business schools would better serve their students by teaching "wisdom rather than vocation, mindfulness rather than rationality and character rather than technicalities" (Weick, 199, August).

Finally, we have to ask the questions: how should management education be carried out and who should be the recipients of this education? The data and arguments so far imply more learning of "softer skills" and "learning in context". Unfortunately, we believe that the record of most US business schools, and a considerable number of the more traditional UK schools are weak on soft skills, whilst the evidence on learning transfer from "schooling" to the workplace does not provide encouraging reading for educators (Lave & Wenger, 1991; Fox, 1997).

On this first point – the record of business schools – Locke (1996) and others (e.g. Raelin, 1994) have argued that US graduate schools of management have been lacking in their contribution to the US economy and the practice of management in general. For example, Robert Kaplan (1992, quoted in Locke) claimed that American schools had contributed almost nothing to significant developments in the business world during the past half century, whilst Robert Samuelson (1990, quoted in Locke) condemned them for teaching "pseudo skills" such as strategic management, instead of providing students with on-the-job experience. Moreover, As Locke (1996) commented:

> *Their professors are chastised for building elegant, abstract models and their graduates condemned for being critters with lop-sided brains, icy hearts and shrunken souls.*

On the second point – the transfer of learning – we have to acknowledge the importance of informal learning at work, the role of communities of practice in facilitating learning in management (Sealy-Brown & Duguid, 1994) and the negative consequences of teaching management out of context (Fox, 1994). Whilst the calls for mangers to become involved in lifelong learning implies more learning in the classroom, perhaps, as Woodall & Welchman (1998) have pointed out, we need to place much greater emphasis on how we can assist firms in taking work-based management development more seriously and, at the same time, learn to integrate our educational efforts into action learning projects, job rotation, internal consultancy and mentoring schemes. In this connection, one of the most interesting examples is Roth's (1999) learning history approach that combines traditional research skills with situated learning.

Mintzberg (1999, August) recently addressed these issues in a typically robust and iconoclastic fashion. His presentation was directed at the questions of: who gets into the classroom and what should they do when they get there? In a presentation directed mainly at the US business schools, one of his major conclusions were that US MBA programs were directed at the "wrong people" (full time students with no real experience of management); using the "wrong ways" (too much emphasis on prescriptive cases and disconnected theory instead of learning in context) and for the "wrong reasons" (by creating a genuine business class that believed they had the right to lead because of credentials earned in the classroom). Thus, whereas, US schools produced 100, 000 students per year, most were full-time, in contrast to the UK which, although educating far fewer, focused on part-time, executive managers. Among his main pointers for the future of MBA programs were:

- Programs should be aimed at training practising managers. Thus part-time students who were company sponsored should be the focus of management education, as distinct from technical education which should be the subject of specialist masters degrees.
- Teaching methods should focus on action learning and reflective learning, in which tutors literally "drop in" learning material to managers to fit with their agenda. These student managers could then make what use they like of it and learn from each other. The corollary of this action learning and reflective learning would be to de-emphasize " lectures and have you any questions" approachesand prescriptive case study pedagogy, during which inexperienced students were expected to pronounce on situations where they had no previous experience.

- Program should dispense with "silo" design, in which participants coming from functional backgrounds were immediately put back into their silos, instead of focusing on the management of integrated business problems,
- Programs should be international and collaborative to reflect the world of business.

His model for MBA programs for the future, as distinct from the kind of specialist masters degrees that are common in Europe, was the Masters in Practising Management (MPM) program run collaboratively with McGill (Canada), Lancaster (UK), INSEAD (France), the Indian Institute of Management, and a number of Japanese universities. Interestingly, this is a model that is become increasingly widespread in the UK and mainland Europe (including a more modest one operated by one of the authors).

Conclusions

In this paper , we have attempted to summarise some of the literature and evidence on changing managerial careers, management development and education in the UK and the US. Although we find that the mainly Us rhetoric is outstripping reality - especially in the UK and Europe - there is robust evidence of substantive changes in organizational forms and in career patterns. Boundarylessness, career-resilience and protean contracts are likely to become more prevalent and will have significant implications for management development and education. The most important of these implications is that there is likely to be increasing demands on employers and business schools to provide management development and management education. However, it is likely that such development and education will need to emphasize general transferable knowledge and skills to meet individual and employer demands for employability. Increasingly, in knowledge-based economies, "knowing how" rather than "knowing what" will be demanded by both parties to the employment relationship. And in line with Weick (1999, August) and Mintzberg's (1999, August) arguments on the future of management education, business schools should concern themselves with teaching "wisdom", "mindfulness" and "character" rather than compete on vocation and technicalities with the increasingly powerful corporate sector. As Mintzberg in particular has argued, however, the US schools may have something to learn from the increasingly international schools in Europe in providing more relevant wisdom and greater insights from more "real worlds" in the global arena. In turn, European schools have much to learn from the professionalism of the US schools in delivering a brand of business education that is still envied by much of the rest of the world.

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The Impact of Facilitative Leadership: Multi-rater Measurement of Behavioral Outcomes of Managerial Leaders

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The outcome of this study reveals that perceived facilitative behaviors are critical in best practices of leaders. These findings link performance outcomes of leaders and members and demonstrate the importance of multi-rater feedback measures. The facilitative managerial-leadership model is very effective in harnessing resources and human capital to meet business challenge. This reinforces the need for evolving and revolutionary managerial- leadership practices to keep pace with the changing demands of the marketplace.

Keywords: Leadership, Management, Organizational Change

Everyday, we awake to front page and business section stories about the changes that come with the globalization of markets, collaborative work structures, and the drive for e-speed and innovation. W. Burke speaks about significant shifts in organizational dynamics from "moderate to warp speed" from "micro to macro" and from "management to leadership" (Burke, 1994). As we sip our morning coffee, we may not always think about how these changes create an ever-increasing demand for savvy managerial-leadership skills and competencies. But as we move from home to office, we understand that this demand and need have never been greater, or more complex. We witness and are apart of the drama of how the compression of organizational hierarchies are creating more responsive "networked" organizations that are more fluid in structure, processes and politics. These revolutionary organizational and cultural changes underscore new business realities with new definitions for leadership.

"Leadership is not so much the exercise of power itself as the empowerment of others" (Bennis and Nanus, 1997). We've heard that e-word before it was ever associated with email or e-speed. The difference today is that empowerment is no longer a "nice-to-have" trite concept, but the cornerstone of how to grow business by helping employees and customers become enterprise "owners" and partners. The top ten of *The 100 Best Companies to Work For* (*Fortune, January 2000*) are noteworthy because of their financial success, but because they also use the power of empowerment to draw and retain talent in a competitive labor pool market. Southwest Airlines, Cisco Systems, Synovus Financial listen to employee input and make changes accordingly, realizing that "what differentiates top companies from their competitors is often the quality of their highly skilled workers." (Levering & Moskowitz, 2000). The savvy CEOs at these companies "understand that having a special relationship with employees is key to their success." (*Ibid.*)

In fact, "best practice organizations always assess the impact of their leadership development process." (Fulmer & Wagner, 1999). Smart organizations such as General Electric, Hewlett Packard, and Johnson & Johnson realize that the development of leadership becomes a competitive strategy to keep their companies alive and thriving in the midst of change. The need to explore a broader range of leadership styles suited for these "empowered," collaborative environments becomes apparent (Bass & Avolio, 1997).

The Impact of Leaders: Bad News and Good

Unfortunately, the literature reveals a high failure rate for leaders. Some researchers indicate that between 60 and 75% of leaders fail (Hogan, Raskin, & Fazzini, 1990). This may be a modest estimate. What are the implications of such widespread failure? There is little doubt that replacing leaders is expensive in terms of money and in terms of the impact on others. The stress to employees and the financial impact to organizations are high. It has been estimated that replacing failed leaders can cost organizations hundreds of thousands, or even millions of dollars (Kaplan, 1991). Within the management, behavioral sciences and human resources disciplines, there is a need to

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better understand the complexities of managerial-leadership as a means of enhancing organizational performance and effectiveness.

While leadership is multidimensional and often difficult to operationalize, research has shown that leaders derail because they fail to build successful relations with others (Kramer, 1997; Van Velsor, 1997, 1998). Leadership, which is a social phenomenon, is constructed through interpersonal interaction (Berger & Luckmann, [1990] c1966; Kouzes & Posner, 1995; Vaill, 1989). It emerges as a result of the constructions and actions of both leader and associate. Management and business practice is being increasingly influenced by research that recognizes the impact of group dynamics, leadership traits, and motivation. Organizational climate studies reveal that 60 to 70% of employees, regardless of occupation or industry, report that the personal relationship to their leader is the most stressful part of the job (Hogan, Raskin, & Fazzini, 1990).

This bad news about the impact of leaders may be good news for human resource and change management professionals. It points to the need for accurate performance metrics that are aligned with the organization's values and goals. It points to the potential for those in human resources to become a strategy partner in helping an organization reach beyond "as is" states to what it can become. It requires a solid research basis for building a foundation that closes the gap between theory and application.

Manager or Leader?

The literature reveals a conceptual polarity between "leadership" and "management." This polarity tends to pit these two supposedly divergent schools of thought. This study points to the need to explore a new managerial-leadership model with best practice behaviors and attributes from each domain. For example, managerial-leaders need to be able to see ahead of today's realities to anticipate consumer needs and the changing demands of the marketplace. Concurrently they ensure that managerial resources are harnessed to get today's work done. Those who evolve into higher-performing managerial-leaders will begin to implement the behavioral practices that create innovative outcomes based on the ability to accomplish challenging goals through and with others.

Such change does not come easily. Old habits do not pass on by means of fairy dust magic or by brandishing the latest empowerment fad about. Managers and leaders will tend to reinforce the organizational rules that heretofore served them well. In doing so, they may actually work against employee participation and the development of self-responsibility, self-initiative, and self-control (Smircich & Morgan, 1982, in Kolb, Rubin, & Osland [Eds.], 1991). Yet, these are the very competencies required for success in participatory work structures.

Facilitative Managerial-Leadership

What then, is the facilitative managerial-leadership model and why is it important? The findings of this study indicate that effective managerial-leadership is significantly connected to perceptions about facilitative attributes. These attributes relate to a leader's congruence, positive regard, empathy, ability to challenge the process, inspire others, enable others to act, model the way, and offer satisfactory rewards. The word *facilitation* or *facilitate* is derived from French and Latin etymological roots. *Facilis* means easy to do and *facere* means to do or make (*Webster's Deluxe Unabridged Dictionary*, 1983). In the realm of psychology, facilitation has to do with "increased ease of performance of any action, resulting from the lessening of nerve resistance by the continued successive application of the necessary stimulus: opposed to inhibition" (*Ibid.*, 1983). Facilitative leadership by definition lessens resistance and increases the likelihood of success. This is accomplished by becoming more facilitative and more skillful at effective managerial-leadership attributes and practices.

Traditionally, leaders have been identified as being focused on "big picture" issues, whereas managers have focused on specific work plans and outputs. Facilitators have been identified with focusing on assisting work groups in working together more effectively. However, managerial-leaders need to be flexible enough to manage, lead, and facilitate. All of these roles are important for organizational success. No single style is appropriate in all situations (Bass, 1985, Bass & Avolio, 1997; Tichy, 1997; Weaver & Farrell, 1997).

The facilitator role provides the bridge between what seems to be two disparate roles. Decentralized, participatory organizations need leaders who are facile in seeing beyond the work being accomplished today to be able to anticipate changing requirements for the future. The facilitative managerial-leader will become increasingly skilled in a number of roles that encompass knowledge, skills, and attributes in tactical, strategic, operational, and organizational science arenas. This is needed to succeed in an ever-increasing complex, changing environment.

What do some of these new managerial-leadership practices look like? This study examines perceived behaviors of "leaders at their best." An example of a best practice, is the ability to "challenge the process." Jacques Nasser, the CEO of Ford Motor Company is driving significant change in a seemingly unusual manner. Nasser states that "we have to change our fundamental approach to work—we have to change our DNA" (Wetlaufer, 1999). He is overseeing a far-reaching, cascading education program that involves all of Ford employees and leaders. The teaching is multifaceted using a "train the trainer approach" and 360-degree feedback. Nasser believes that teaching drives change better than any other way, and Ford now has more than 1,500 leader-teachers worldwide who have reached a total of 55,000 salaried employees" (*Ibid.*).

When managerial-leaders teach their employees, they are encouraged to actually practice the concepts espoused. This "modeling the way" behavior, in turn, assists constituents to learn and practice facilitative managerial-leadership behaviors in their jobs. Employees become "shareholders" who are more highly motivated to be fully present and involved in their work lives. This evolving and transformational managerial-leadership model uses self as instrument, understands group dynamics, assists others in clarifying their task and task completion, and helps groups progress toward their goals (Weaver and Farrell, 1997).

It's About People

Research on managerial-leadership is best approached from a multi-disciplinary collaborative approach. This should include management, psychology, sociology, and organizational development and other disciplines. An extensive literature search of numerous sources across these disciplines was performed, which produced a wide range of factors describing the qualities, skills and socio-emotional attributes of effective managerial-leaders. In particular, it is important to appreciate the complexity of individual and organizational systems that factor in managerial-leadership success or derailment.

Leaders tend to fail because of relationship problems with others, including boss, peer, and subordinates. Leaders are enmeshed in a web of relationships (Lawler, 1986; Tichy, 1983 and 1997). Tichy's description of the technical, political and social aspects of organizational systems helps explain why technical brilliance alone will not create success. Viewing the impact of leadership from this lens helps to explain the cascading political and economic outcomes of derailed leaders. It points to the importance of understanding personal and group psychology and the informal, socio-aspects of system of relationships. Peter Vaill, a well-respected organization development specialist, has argued, "all management is people management, and all leadership is people leadership" (Vaill, 1989). Thus, regardless of whether one calls oneself a manager or leader, the common thread has to do with people.

Many business leaders will not recognize the name of Carl Rogers, one of the preeminent 20th century American psychologists who developed a human relations theory based on clinical practice. Nonetheless, most leadership and management textbooks and articles refer to the importance of interpersonal skills such as active listening or some variant of Rogers's non-directive approach as a prerequisite for employee empowerment, team building or humanistic management (Kramer, 1997). An influential source for this study is previous research performed by Kramer, who utilized Rogers's theory and brought it out of the shadows. This pivotal study offered a statistical methodology that captured *leaderly listening* factors from empirically driven data (*Ibid.*). These ideas and the Kramer approach helped to crystallize this researcher's interests in measuring perceptual feedback, which is critical in improving facilitative managerial-leadership abilities.

It's About Perception

The importance of understanding the power of perception cannot be overstated. This study denotes that leadership outcomes—effectiveness and satisfaction with the leaders and employees' willingness to perform beyond expectations—are indelibly tied to the employees' perceptions about their leader. This study focused on the behavioral outcomes of managerial-leaders measured by instruments that elicit constituents' perceptions of their leaders. An aspect of behavior that has not been consistently emphasized is the process of perception, especially that of person perception (Zalkind & Costello, 1962, in Kolb, Rubin, & Osland [Eds.], 1991). The notion of person perception is particularly important because managerial-leaders symbolize the organized situation in which they lead. Their behaviors and verbalizations create imagery in the minds of the organizational members, thus influencing actions within the setting as a whole. It is important to recognize and emphasize the power that the leader's position has on the frame of reference of others (Smircich & Morgan in Kolb, et. al, 1991).

How should employee perception and feedback be handled for managerial-leaders? In the past, the information flow and feedback came from the top of the organization to the bottom, with leaders giving evaluative feedback to constituents only. Leaders and managers were rarely given the kind of behavioral outcome information that could help them improve their performance and effectiveness (Hesselbein, Goldsmith, & Beckhard [Eds.], 1996; Kahnweiler, 1991; Lawler, Mohrman & Ledford, 1992; Schein, 1987; Weaver, 1997; Weisbord, 1987, 1992). In the story of *"The Emperor's New Clothes,"* the leader lacked critical operational and perceptual feedback data. What we know in terms of performance improvement is that what is unmeasured remains hidden from awareness and unchanged. The development of reliable and valid multi-rater assessments may help pave the way for enhanced communication within an enterprise.

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Research Design and Questions

Rationale and Importance

This study addresses the gap in providing reliable data from a bottom-up perspective about beneficial managerial-leadership attributes in participatory environments. The issues that arise in relating to and with others must be addressed constructively (Harrington-Mackin, 1994). Measures of individual work behavior create a bridge between theory and practice (Naylor, Pritchard, & Ilgen, 1980). Performance measurement provides an impetus for performance improvement (Rummler & Brache, 1995). It provides a means to help make organizational expectations and standards explicit (Austin et al., 1991). The inference is that experiences and perceptions about leadership behaviors affect performance, and impacts the emotional and financial health of organizations as well (Zalkind & Costello in Kolb, et. al., 1991).

Perceptions often become reality. As we have previously seen, perceptions can be costly in terms of the reality of leadership derailment. The increase in collaborative work structures and processes has also influenced the flow of communication within an organization, which has subsequently created the need for exploring new questions about leadership. Confidential, perceptual feedback from constituents is needed to provide input in order to understand and clarify perceptions and to aid in interpersonal development. Multi-rater assessments, such as 360-degree feedback, may provide an avenue for constructive expressions about the social-emotional aspects of leadership that, if ignored and left to fester, can lead to failure for work groups and leaders.

Methods for Measurement

Three multi-rater assessments were used in this research to collect data on the multiple dimensions of managerial-leadership. The Kramer model provided a foundation for using multiple performance measures and studying convergence and correlations. The positive results of that study, based on the human relation's theory of Rogers, called for further evaluation.

The three multi-rater assessments used in this study included: Leadership Practices Inventory (LPI) by Kouzes & Posner; Multifactor Leadership Questionnaire (MLQ) by Bernard Bass; and Relationship Inventory (RI) by Barrett-Lennard. The key variables measured and the measurement tools used are outlined in *Table 1* below. These tools assessed perceived leadership practices relating to challenging the process, inspiring and enabling others to act, as well as attributes of routine, transactional management behaviors such as active management-by-exception. In addition, they addressed congruence, positive regard, and empathy as perceived by employees. Each assessment instrument has extensive research handbooks available that detail the statistical reliability and validity.

The three facilitative factors were derived from Rogers's human relations' theory based on his clinical experience. Rogers observed that these three fundamental conditions must be present in the therapeutic relationship for improvement to occur. These included empathy (accurate understanding), positive regard (respect), and congruence (genuineness). For his doctoral dissertation as a student of Rogers, Barrett-Lennard developed the Relationship Inventory (RI) in 1959. He developed the methodology based on the notion that the subjective experiences of individuals "can be meaningfully and usefully represented on a scale of quantity, provided the origins, procedures and main presumptions of such measurement are held in view" (Barrett-Lennard, 1986).

Since its validation in 1959, the RI has become a highly respected instrument in behavioral science research, used in over 400 research studies. Most reliabilities across the scales are .85 or above. The RI's diverse application is found well beyond the client-therapist relationship to other key relationships such as individuals and groups and supervisors and employees (Barrett-Lennard, 1986).

The Leadership Practices Inventory (LPI) was developed from the realm of business management and organization development. Kouzes and Posner's five practices of "leaders at their best" (see *Table 1*) were derived from their extensive research on the factors that managerial-leaders drew upon to be their personal best at leading others to get extraordinary things accomplished (Kouzes & Posner, 1995). Test-retest studies of the LPI on a database of nearly 60,000 respondents from around the world are ongoing. On the basis of a sample of 43,899 respondents from a wide array of professions, internal reliabilities ranged from .82 to .92 on the five factors. Test-retest reliabilities were at .93 or above.

The factors of routine, transactional management and the outcome factors (see *Table 1*) were derived from Bass's Multifactor Leadership Questionnaire (MLQ). According to Bass, who has also done extensive research on leadership and performance issues, there are two types of leaders: transformational and transactional. "Transactional leadership is a process of gaining compliance from associates through contracts with the leader. The contractual relations may be explicit or implicit. The leader clarifies expectations and may exchange promises of reward or disciplinary threats for the desired effort and performance levels" (Bass, 1997). Bass (1985) established the construct validity of the MLQ scales. In a series of nine samples (N = 2,080), based on leadership assessments made by members on MLQ Form 5X-Short, the average alpha coefficient reliability's for the 21 items ranged from .74 to .94 (Avolio, Bass, & Jung, 1996).

Table 1. Variables Measured and Measurement Tools

Key Variables	Measurement Tools
Rogers's Three Facilitative Conditions	
Leader is congruent Leader shows regard Leader is empathic	Barrett-Lennard's Relationship Inventory (RI) (40 questions)
Five Practices of Leaders at Their Best	
Challenging the process Inspiring a shared vision Enabling others to act Modeling the way Encouraging the heart	Kouzes & Posner's Leadership Practices Inventory (LPI) (30 questions)
Three Attributes of Routine Management (Transactional Leadership)	
Contingent reward Active management-by-exception Passive management-by-exception	Bernard Bass's Multifactor Leadership Questionnaire (MLQ) (12 questions)
Three Leadership Outcomes as Assessed by Members	
Effectiveness of leader Satisfaction with leader Willingness to perform beyond expectations	Bernard Bass's Multifactor Leadership Questionnaire (MLQ) (9 questions)

Research Population

The feedback data were collected in 1998 from members (N = 182) of a business unit of a large government-contractor systems engineering firm outside of Washington D.C. Anonymity and confidentiality of responses were guaranteed as part of this study. Empirical, quantitative research was conducted to test hypothesized relationships between factors pertaining to facilitative behaviors, best practices of leaders, leadership outcome factors and aspects of transactional, routine management. In the analyses, factor analysis and multiple regression statistical tests were performed. Redundancies were reduced by means of multivariate analyses. The numerous statistical tests were performed to ascertain whether the hypotheses, which relates to the three research questions, could be supported. The key statistical tests and the results will be outlined in the next section.

Hypotheses and Research Questions for Exploration

The key hypothesis was that facilitative conditions and best practices of leaders would show strong correlation. Furthermore, if a strong correlation existed, these combined factors could be labeled Facilitative Leadership (FL). Another hypothesis was that facilitative leadership qualities carry more weight (or explain more variation) in terms of employee's perceptions of leadership outcomes than aspects of routine, transactional management Routine Management (RM). The leadership outcomes relate to perceived effectiveness, satisfaction, and willingness to perform beyond what is expected (enhanced performance).

Three questions were posed for testing these hypotheses in the design of this study. They included the following. First, how strongly do the three facilitative conditions (congruence, regard, and empathy, based on the RI) correlate with the five practices of *"leaders at their best"* (challenging the process, inspiring a shared vision, enabling others to act, modeling the way, and encouraging the heart, based on LPI)? Second, to what extent do a leader's facilitative behaviors (congruence, regard, and empathy) predict each measure of leadership outcomes (employees' assessments of perceived leadership effectiveness, satisfaction with leaders and willingness to perform beyond expectations)? Third, does perceived facilitative leadership have more impact on leadership outcomes than aspects of routine, transactional management? If so, what is the added value of leaders' facilitative behavior (based on the scales in the RI and the LPI) above and beyond three attributes of routine management (based on the MLQ) of contingent reward, active management-by-exception, and passive management-by-exception?

Statistical Tests and Results

In the following paragraphs, a concise summary is given of all of the statistical tests performed for each research question and the significant outcome. These paragraphs are ordered in "steps" to correspond to each question posed. The findings indicate that effective leadership is significantly connected to perception about facilitative attributes. But, just how much of leading is facilitative?

Step One: Did the facilitative conditions correlate with the five best practices of leaders at their best? If they did, how strong was this correlation? Factor analysis and canonical correlation were performed using the three facilitative conditions as the independent variables (IV) and the five best practices as the dependent variables (DV). Facilitative leadership factors explained more about members' ratings of leaders' effectiveness and satisfaction with the leader over and above aspects of routine management. The redundancy index suggests that 44% (at .0001 significance level) of leadership practices overlap with relational/facilitative factors. Pearson and factor analyses were significant. A high canonical correlation produced (80%) and the redundancy index of 44% provide evidence that facilitative behaviors can be mapped onto practices of leaders at their best. This relationship between IV and DV was labeled "Facilitative Leadership" (FL). Question One was supported.

Step Two: Was a link demonstrated between constituent's views of a leader's facilitative behavior and the leader's outcomes? Multiple regressions were performed with the dependent variables (DV) of the three leadership outcomes (see *Table 1*) and the IV of the facilitative condition set, producing significance ranging from 52 to 73%. Canonical correlations between the DV set and FL produced the canonical variate Y that measures the phenomenon of leadership and facilitative behaviors together, which we have labeled "facilitative leadership" (FL). Facilitative leadership by itself accounts for 73 to 85% of the variation in the three leadership outcome measures. Based on these findings, we can use facilitative assessments of leaders to explain outcomes of member ratings on the perceived effectiveness of leaders, members' satisfaction with leaders, and members' willingness to perform beyond expectation. Question 2 is supported.

Step Three: What is the added value of facilitative leadership above and beyond routine, transactional management? Stepwise multiple regressions found that facilitative leadership is the strongest predictor of effectiveness (82%) and satisfaction (55%). However, reward was the strongest predictor for willingness to perform beyond expectations (54%). Strong negative correlations for transactional management and outcome measures were revealed. Contingent reward, an aspect of routine management, proved important to worker's willingness to perform beyond expectations. Reward can be facilitative when used to support the growth needs of members (Bass & Avolio, 1997). Questions 3 is supported with the understanding that contingent reward is also a critical outcome variable.

Discussion

Numerous tests were performed in the data analyses to ascertain the outcome of the research questions. The high multicollinearity between the predictor and criterion sets indicated a possible underlying pattern or positive relationship between facilitative/relational attributes and best practices of leaders. Facilitative leadership by itself explains between 73 to 85% of the variation in leadership outcomes. 44% of best leadership practices are facilitative in nature, shown by the overlap with relational/facilitative factors.

The findings indicate that employees are willing to perform beyond expectations when they perceive facilitative managerial-leadership behaviors (such as modeling the way and enabling others to act). In addition, performance is tied to the appropriate use of contingent rewards (e.g., recognition or bonus plans), usually considered part of the domain of transactional or routine management. This sends a message about the importance of connecting performance issues to employees' need for facilitative managerial-leadership behaviors and tangible evidence of appreciation for their efforts. As previously indicated, this coincides with Bass's notion that reward can provide a facilitative means for growth and transformation if it connects with what is rewarding to employees.

In terms of possible limitations of this study, caution must be exercised in how correlational studies are interpreted. With any correlational research, causality of relationships cannot be assigned. Multivariate statistical analyses were applied to intact rather than experimental groups. A "random assignment of objects to experimental treatments is necessary for the validity of our analysis and any inferences of causality between the experimental variable and the criterion variable." (Kachigan, 1991).

This, of course, is not to say that correlational data cannot reveal factors that are almost certainly causally related, "but... the relationship may also be due, either in whole or in part, to other unidentified confounding variables" (*Ibid., 1991*). There is also the possibility that other variables, such as gender, race, functional disciplines, or cultural background may be related to the facilitative predictor set or the leadership criterion set or both. To maintain confidentiality, it was not possible to include demographic information in this study. Also, it is difficult to generalize the findings to other industries or occupations with different population characteristics. However it can be noted that in Kouzes and Posner's extensive leadership research, their "...findings are relatively consistent across people, genders, and ethnic and cultural backgrounds, as well as across various organizational characteristics (such as functions the organization employs, size and its public- or private-sector status)" (Kouzes & Posner, 1995).

Implications for HRD Professionals and Conclusions

There are several reasons why this study is important and relevant for HRD and change management professionals. For one, it is critical that the knowledge base for understanding key managerial-leadership factors related to positive outcomes is increased through sound research. Second, there are numerous implications for how this data and knowledge can be applied in HRD and change management practices. These include providing: selection criteria for managerial-leaders and succession planning; strategic means for measuring and increasing productivity and profitability; a consulting basis to decrease conflict and to increase worker satisfaction and willingness to perform beyond what is expected; research data for improvements in formal and informal managerial-leaders' and work teams' training and development; competency-based performance improvements; a means for structuring incentive pay and rewards to boost performance; and assistance to decrease turnover, leadership derailment, and monetary losses and product failures.

These results may be useful in increasing social and emotional intelligence for working with and in work groups. They offer learning benefits to current and future managerial-leaders at all levels in organizations. It also raises the need for additional research on multi-rater assessment tools and perceptions.

In closing, this article has presented theoretical underpinnings, key research findings, and discussion of results, limitations, and implications for HRD professionals based on this empirical research. The need for an understanding how to improve organizational effectiveness through facilitative managerial- leadership and collaborative work structures is vital. To remain competitive in this aggressive market environment, managerial-leadership attributes and behaviors need to keep pace with changes that are creating collaborative, agile work structures and strategies that encompass innovation and speed.

We have seen that complexity and speed of change are increasingly influencing HRD and managerial-leadership practices. These changes make it even more important to recognize the impact of group dynamics, leadership behaviors, and perception. HRD professionals need to understand and stay current with research in order to assist organizations in integrating a facilitative model that will also serve the business objectives of the enterprise. The HRD and change management professionals, as effective strategic partners in organizations, are in positions to influence managerial-leaders to become more facilitative as they challenge the process and model the way.

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Why HRD Practitioners Can Lack Respect: Sizing the Credibility Gap Between What Top Managers Want and HRD Professionals Deliver

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There has been a great deal of discussion in recent years about the credibility of HRD practitioners. Does what they do and deliver make a difference in the "bottom line" of the business? How well integrated are the HRD specific programs with the overall strategies of the business? A small team of HRD scholars and practitioners looked at the issues involved and available research in arriving at ten reasons why HRD practitioners can be seen as outside the mainstream of the business and lack credibility. Their findings were then used to leverage a "threaded dialogue" over the Internet by HRD scholars and practitioners around the world.

Keywords: HRD Credibility

Some issue areas are difficult to address. Given all the important contributions made by those who consider themselves HRD practitioners, talking about credibility problems in the profession can be an uncomfortable endeavor. While there has been a healthy tendency to admit that professional practice may be lagging behind real-world business needs in certain areas, there has been less inclination to try and isolate perceived shortfalls and their causes.

It can also be difficult to clearly identify gaps between what the top leadership of a company wants and HRD practitioners deliver. It is not necessarily what you talk about in open forums. Such problems are usually held closely within the organizations experiencing them. In fact, such problems may well prove "undiscussable" within the companies involved. HRD can as a result live what might be called a "twilight existence". HRD is there and does its job, but not always to the accompaniment of high praise. If there is dissatisfaction, it can be quietly expressed via termination of employment and selective "downsizing" of the human resources function. When displeasure is expressed openly, it frequently relates to the inability of HRD to prove relevancy or deliver metrics that unequivocally prove linkage of HRD interventions to performance, productivity and profitability.

For all the reasons already given, examination of shortfalls between what HRD delivers and the top leadership wants is a complex undertaking. The fact that it is difficult to research probably accounts for the lack of a strong and definitive research history in this area.

Problem Statement

What are the gaps between what HRD delivers and top leaders and managers want? What does the research show? If there are gaps, what are they? How can we go about closing or at least narrowing them?

Theoretical Framework

Several HRD scholars and practitioners (most qualify as both) associated with the Research Department and the Research and Practice Committee of the American Society for Training and Development (ASTD) labored for the better part of a year with this multi-faceted problem statement. The Research Department is internal to ASTD. The National Research and Practice Committee is affiliated with the Research Department and is made up of scholars and practitioners who volunteer their time to encourage research studies related to Human Resource Development, stimulate the wider dissemination of research findings related to the field and promote a broader understanding of research design and methodology. The Research and Practice Committee has a rich blend of scholars and

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practitioners, including senior corporate HRD practitioners from companies like General Motors, Andersen Worldwide, Union Carbide, and Lockheed Martin. The universities involved include Columbia, Johns Hopkins, Oklahoma State, Virginia Commonwealth, Marymount and Indiana State. The Center for Creative Leadership is also represented, as are a number of consulting firms; such as, W. Warner Burke Associates, Inc.; People Architects, Inc.; and, the Institute for Strategic Learning. For this particular investigation, five individuals became most directly involved, with the internal Research Department and Research Committee of ASTD operating as a seamless entity:

1. Robert L. Dilworth, Associate Professor, Virginia Commonwealth University.
2. Timothy R. McClernon, Principal Partner, People Architects, Inc.
3. Lyle Yorks, Professor, Teachers College, Columbia University.
4. John Redding, Executive Director, Institute for Strategic Learning.
5. Mark VanBuren, ASTD's Director of Research.

The proposal authors were a part of this effort. Much of the work was done through independent review of research sources. Each investigator also had a network of associates in business and higher education that they could tap into for ideas. There were also innumerable teleconferences over the course of a year, as well as frequent e-mails that shared what was being learned, and even a few revelations.

In a sense, the "Gap Team", as it came to be called, cast its net widely. It then progressively sifted what was being uncovered in looking for common themes. The scope of what was being identified was gradually narrowed down and clarified. It was a tedious and at times frustrating process. The theoretical framework was both inductive and deductive. The team looked for specific indications of problems even as it looked at the big picture, including the dynamics of the global market environment and business climate in which HRD is embedded.

The idea of creating web sites centered on real issues facing the profession, germinated as this effort was underway. It resulted from two publications released by ASTD in 1997. Both of these publications were under the general title of "What Works". One publication addressed several areas related to Training and Development Practices and the other focused on Assessment, Development, and Measurement. It seemed the appropriate time to pursue a real time on-line approach to creating dialogue in critical areas, with even a tighter link between research and practice. The desire to create a web-based dialogue mechanism ended up being combined with the efforts of the Gap Team. The research cited in this proposal constituted the pilot test in moving to a more web-based approach to critical dialogue.

Research Questions and Propositions

Three questions drove the research. They set the stage for the ASTD web site that was launched in late October, 1999. These questions are:

1. Why does HRD often experience low levels of credibility within our organizations?
2. Why do many of our senior managers see HRD as not being a credible contributor to the bottom line?
3. Why do so many managers continue to believe that the cost of training is more than the benefit to the organization?

Methodology and Research Design

The "Gap Team" worked to develop the "leading reasons" of why HRD professionals can end up enjoying "little or no respect." Arriving at the list was an iterative process. In the end, ten over-arching reasons for failure to earn respect were identified. In each case, the Gap Team developed the following substructure:

1. Sound familiar? Examples were developed of the type of situations commonly associated with a given reason.
2. What do we know? Factors bearing on the problem and ways to overcome it were cited, as well as research studies that can provide added information.
3. What can you do? Here, specific remedies were outlined.

Those wishing to have background information on a research study being cited can directly index a one-page summary of the research study that is a part of the web site. The summaries of research studies are organized as follows:

1. Author.
2. Year.
3. Title.
4. Source.
5. What was done?
6. What was the bottom line?
7. What does this mean to me?

The Gap Team results were then built into a special web site that allows members of the profession to call up and review the investigative results in a variety of ways.

Because the report was the product of a small team of investigators, two additional steps were taken before opening up the web site to threaded conversations/dialogue around the issues. The first step was to have a group of leading scholars, individuals who had not been involved with the study, visit the web site and open up a dialogue that could later serve as a "discussion starter". The next step was to have leading HRD practitioners visit the site and do the same thing. These two preliminary steps also served to underwrite the study effort, surface points of view that had been overlooked and identify any additional research sources. They served to triangulate what had been turned up by the Gap Team. Did the team miss something? Was there another way to view earlier study results?

Following these two "discussion starter" steps, the web site was opened up to anyone having an interest in entering the dialogue. From a "research design" point of view, the process used is considered a very effective way to bringing informed dialogue to bear on a critical area. The "Gap Team" in effect, prepared the "playing field" for the profession at large.

Results and Findings

The top ten reasons identified for the gap (why the profession can fail to enjoy respect) were:

We don't understand how globalization impacts HRD.
We are kept out of the loop.
We don't/can't take the initiative.
We don't know how to prove the value of HRD.
We have a narrow range of skills.
We are part of HR functions that also lack credibility.
We keep using the same hammer: classroom training.
We spend time doing things that senior managers do not value.
We disagree with senior managers about the purpose of HRD.
We don't know much about our business.

All of the reasons are significant, but in order to show the texture of the findings, as ultimately made available on the web, reason number 4 will be looked at in depth. This will also allow a full examination of the format used. What follows is a verbatim extract from the web site presentation.

Reason No. 4: We don't know how to prove the value of HRD.

Sound Familiar?

1. "I know this training program makes sense. But I can't prove it in dollars and cents. I can't do a Kirkpatrick Level 4 evaluation and an ROI analysis on every training program".
2. "Our company keeps talking about how customers are important. Yet the only thing we seem to really care about are sales and profits".

What we do know.

1. Certain types of HRD programs (if executed very well) can produce an 8:1 return on investment. However, most managers do not recognize the potential financial impact of training.
2. Not all HRD programs should be measured in terms of short-term financial results. Probably the best measures are those that are directly related to the company's business strategies.
3. There is still a strong tendency to use financial measures as the major way to measure business performance. However, this is changing. Most companies are currently trying to implement balanced scorecard systems that treat non-financial measurements (including human resource related issues) as important as financial measurements.
4. It is possible to create a value-chain analysis that will directly link key HRD factors to business performance. Sears has done this very successfully.
5. It is not always necessary to do a Level 3 or Level 4 (Kirkpatrick) assessment. Well-designed-Level 1 evaluations are effective in predicting changes in performance.

Study Resources. Six study resources were provided and are listed below. While other pertinent studies were identified during the literature review, they were not considered in-depth research.

1. Training Investment Can Mean Financial Performance (Bassi, 1998).
2. Improving the Corporate Disclosure Process (Eccles & Mavsinac, 1994).
3. The Value of Training in the Era of Intellectual Capital (Conference Board Report, 1997).
4. The Balanced Scorecard: Translating Strategy into Action (Kaplan & Norton, 1994).
5. The Employee-Customer Profit Chain at Sears (Rucci & Quinn, 1998).
6. Demonstrating the Financial Benefit of Human Resource Development: Status and Update on the Theory and Practice (Swanson, 1998).

What Can You Do?

1. For programs that are designed to produce immediate, short-term impact on financial performance (many sales programs fit into this category), conduct ROI studies to show training's financial impact.
2. Find out if your company is implementing a balanced scorecard system, or a similar measurement system. If so, learn all you can about it. Help the company develop useful HR related measures as part of the scorecard. Use the balanced scorecard measures to assess the effectiveness of HRD initiatives.
3. Work with senior managers to do a value-chain analysis, in which HRD factors are directly related to business performance.
4. Modify your Level 1 assessments to focus on two questions: (1) What have you learned that will help you back on the job? (2) Do you intend to apply what you have learned back on the job?

Summary: The brief sketch-out just provided reflects the conciseness of the commentary around each reason for limited credibility and how to deal with it. Address of other reasons is equally straightforward, with each designed to provide a platform and stimulus for informed dialogue.

Conclusions and Recommendations

1. There is merit in building a framework for review of an important topic area in the profession, as was done in this case. It began with a team of respected scholars and practitioners who came to believe that their own dialogue advanced understanding of an area that has not received much research attention. That effort then transitioned into use of the World Wide Web as a medium for even broader debate.
2. The review effort undertaken was useful in determining areas that seem to require additional research in relation to research credibility. For example, it clearly points to the need to develop better ways of measuring the impact of HRD on business success.
3. The design of this "research" excursion caused emphasis to be placed on the relationship of research to practice.

4. Such an investigative process provides for in-depth probing of areas that can help define the profession and trace the cutting edge.
5. This type of effort allows for experimentation in effective use of the World Wide Web to accelerate and broaden our ability to focus on key areas quickly. The process is much faster and more comprehensive than developing ideas in books and journal articles (if not electronic) where the dialogue tends to be initially one-way, discontinuous and slow to materialize.
6. The act of generating information and reflecting on a critical issue area represented a substantive learning experience for those who engaged in this effort under the aegis of ASTD.

How this Research Contributes New Knowledge in HRD

As already suggested, there are several ways such research can contribute new knowledge to the profession:

1. It brings key scholars and practitioners together around what is considered to be a critical topic area.
2. In terms of research design, it directly relates research to practice.
3. The concentrated integration of existing studies with perceived shortfalls in HRD credibility, as occurred in this study effort created *new knowledge*.
4. The design of the research in this instance caused a wide-ranging environmental scan to take place vis-à-vis HRD as a profession. Such efforts can only serve to better define the field, pinpoint areas in need of improvement, extend the cutting edge by leveraging research resources and "thought leaders" and help create a learning community in the profession.

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Issues in Human Resource Development in Central and Eastern Europe

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Despite evident commitment of former communist countries of Central and Eastern Europe to education and training in the cause of national modernisation, there are now serious problems in the HRD field. This study addresses the main problems and considers their causes and how these may be overcome. A large scale empirical study in the Baltic States and Slovenia is combined with data obtained from less formal visits to organisations in Central and Eastern Europe, and literature available in English to generate general conclusions and recommendations for improvements.

Key words: Central and Eastern Europe, Vocational Education and Training Reform.

As contact with the former communist countries of Central and Eastern Europe continues to grow, the opportunities increase for a deeper dialogue about lifelong learning between Western European HRD experts and senior managers of public and private organisations undertaking modernisation programmes. (Autleytner, 1999). The European Commission is very aware of the need to develop the state education and training systems in all the central and eastern countries of Europe which are pressing to join the European Union, (the pre-accession countries). A large number of collaborative projects have now been funded by the European Commission with the aim of bringing expertise from Western European countries to the assistance of leaders of organisational change in the context of developing younger and older people to cope with the challenges facing the former communist countries.

The author has been involved in a number of such projects and has had the opportunity to travel to a number of the countries concerned to investigate the situation and advise as appropriate. This paper is based on these experiences and raises research questions which are relevant to most of the Central and Eastern European countries as follows:

1. Given the commitment of the post war Communist governments to strong state education and training systems in the quest for modernisation, why are these now seen as so poorly developed for the next millennium?
2. Why is the concept of HRD so alien to most work organisations in the public and private sectors (leaving aside western companies now established in Central and Eastern Europe)?
3. Why is learning seen as difficult to carry out except within the context of didactic class based teaching methods, such that open and distance learning methods for example are still so poorly developed?

Research Approach

As indicated above, the research reported here has been conducted on an opportunistic basis, largely as an offshoot of practical development project work, or short term consultancy. Indeed, the research questions above have been driven deeper into the author's psyche by the fact that so many evidently different problems in different countries have boiled down to the same problems.

As time has passed during the 1990's these questions have moved increasingly to centre stage, so that during visits to relevant countries, and when the author has received visitors from these countries, increasingly purposeful efforts have been made to gather more data relevant to the questions.

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The data collection approaches have included interviews with a very wide variety of stake holders in the business of learning, from government ministers to members of chambers of commerce, and from professors to students, and schoolchildren. A large volume of publications has been collected from the countries where projects have been carried out. While there can be language problems, a surprising number of such documents are in English, partly due to the requirements of the European Commission relating to the national accession programmes for future EU membership. The European Commission itself has been a valuable source of information, and more so the European Training Foundation in Turin, which has a major role in regard to modernising vocational training systems in Central and Eastern Europe.

Standard literature searching has been of some value (Kulich, 1995) although the focus of much literature on the social, economic and political problems of the former communist countries is on finance, marketing and the steps to improve quality and productivity of manufacturing, etc, rather than on learning and HRD. A few quotations best illustrate the nature and extent of the problems faced by Central and Eastern European countries in the years following the collapse of the Communist system.

Dietrich and Kurzydlowski (1992) state:

> "Modern Polish industry has to a large extent developed under strict central planning and as such is characterised by a low standard of competitiveness. Polish industry is based on large, inefficient state-owned enterprises hiring thousands of workers and run by executives with little knowledge of what it takes to compete in a market economy. In addition, the decision making process is hampered by a lack of clear regulations defining the duties of managers."

Driefelds (1996, p129) writing about manufacturing in Latvia following the Soviet period states:

> "One of the most invidious relics of the old system is lack of competition. Factories became complacent because they had an assured market and hence issues of price, quality, variety and customer orientation did not receive much attention. Soviet factories often became centres for socializing and welfare with production and work taking on secondary importance. Questions of discipline and labor productivity could not be resolved under conditions of labor scarcity.
>
> As yet, the dominant orientation of managers is to protect their redundant workers by keeping them on the payroll. For example, during the first two months of 1993, 16 per cent or 343,000 of the paid industrial workers had not worked a single day in their enterprises. Such artificial maintenance of employees increases the cost of production and of products, that, as a result, become less competitive and often cannot be sold. The working employees cannot receive increases in wages because of this burden of "hidden unemployment" and their productivity and work satisfaction decrease and they become demoralised. All this misplaced paternalism only increases the likelihood of a total shutdown of production"

Klenovsek (1998 p47) reports for Slovenia:

> "It now became clear that in the centralised (socialist) economy there used to be employed a non-productive (unproductive) workforce. By the end of the eighties it became evident that this was the cause of the bad productivity results and of productivity decreases which had been going on for several years. In 1992, when the registered unemployment rate grew rapidly to 13.8% we still believed that the growth would somehow get stabilised within the following five year period. The most optimistic prognosis had even predicted its decrease. Unfortunately the data showed the opposite, the registered unemployment rate shows an increase to 15% in 1995, a slight decrease in 1996. In 1997 it has been around 14.5% (last December there were 128,572 unemployed people in Slovenia)."
>
> Klenovsek (1998, p48) goes on to report on market conditions and government interventions to deal with the unemployment problem as follows:
>
> "The labour market condition is still rather bad which is particularly true for specific groups of the unemployed.
>
> There is a particularly poor offer of free jobs in new areas. For the last two years we have been noticing an increased structural unemployment, which means that for some specific jobs there is

> no properly qualified or trained workforce. Partly we try to solve this issue by training the unemployed. But this does not happen in an intense enough way."

Velovski (1995, p70) writing of the particularly difficult labour market situation in Macedonia, following independence from Yugoslavia, refers to the tendency for the education system to exacerbate the situation:

> "------ education appears as an agency in the accumulation of (a) surplus of cadres and (an) increase of unemployment in the country. This kind of phenomenon is especially present in the sphere of university education. In the race for higher profitability, the university institutions register and produce cadres in such a dimension that the labour market in the state would not be able to absorb them for the next 20 years. If this kind of educational and registration policy continues, Macedonia has a chance to rise to a high point among the countries in the world with the highest rate of functionally non-useful university educated cadre.
>
> The situation of the unemployed without any qualification is alarming as well. If we take into account the escalation of modernisation of the technical and technological base of working process and increase of the lower limit of professional qualification compatible with this kind of trend, then the number of 74,594 persons without qualifications or 42.1% of the complete number of unemployed, is a strong indicator of the bad perspective of this category of potential workers in the next period."

Velkovski (p71) then addresses the issue at the heart of this paper by referring to:

> "-----the extremely bad situation in the sphere of adult education and its placing on the margins of social interest, the chance of this category of unemployed and all the others with a lower educational level and degree of qualification, to change their qualification status by means of further education, changing of qualification or further qualification are depressingly small."

This point is constantly reiterated in the literature concerning adult and continuing education and training in Central and Eastern European countries.

Nor is the outlook for those in employment satisfactory in regard to employer support for lifelong learning. Taruskiene, writing about continuing professional development in Lithuania (1998, p143) could be considering the attitude of many employers in Central and Eastern Europe when she states that the outlook of employers is determined by:

> - "Socio-cultural environment. Cultural values in society affect employers' outlook towards CPD of their employees. As long as a culture of lifelong learning is not consolidated in society, employers are unlikely to encourage CPD, even if they have resources to spare. A learning culture may be created within organisations, but it will not be achieved without the support of management. Therefore, it is important to introduce values of democratic leadership and learning organisations to management in Lithuania.
>
> - Legislative basis. Legislation supports CPD only for those unemployed who do not get a job within 6 months after they registered at the Labour Exchange. Generally, employers are neither directly (e.g. through taxation) nor indirectly encouraged to their employees' CPD.
>
> - Economic development of the country. The economic situation in Lithuania is unstable, legislation is changing constantly, and the system of taxation is unfavourable to business and industry. Many firms and enterprises are highly uncertain about their future and, therefore do not make long-term plans. In such a situation it does not seem wise to invest in employee CPD. Common practice is to look for competencies already available on the labour market.
>
> In general, employers are still passive with regard to CPD for their employees."

Intervention Strategies of the European Commission.

As mentioned above, the European Commission is now very active in regard to the political, social and especially the economic problems of the countries of Central and Eastern Europe. It is now clear that nearly all of these countries wish to become members of the European Union at some time in the future. If this is to be the case a great deal of reform and reconstruction of all aspects of life and work will be necessary. While the European Council of Ministers and the European Parliament are broadly supportive of these accession aspirations, it is clear that they are not willing to pour unlimited amounts of money into the relevant countries in the hopes of improvements and modernisation. Those countries most willing to go forward under democratic and capitalistic economic principles are treated favourably in terms of strategically planned interventions involving EU derived resources (advice, expertise, finance, etc).

While much work is focused on the development of the physical infrastructure of these pre-accession countries, there is considerable concern to modernise the education and training systems. The aim is to help develop the capability of the countries to build and sustain modern societies through their own efforts. This policy has major implications for human resource development, and given the problems outlined above means that the European Commission is required to put much effort into developing strategies for vocational education and training in all the pre-accession countries. The European Training Foundation based in Turin has a major responsibility for this work, undertaking research and consultancy, and leading on initiatives to improve the situation, drawing upon the resources of the EU PHARE programme for reconstruction in each country. National 'observatories' for vocational education and training reform have been set up in support of this work. In the PHARE area, observatories have been set up in Albania, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovenia (European Training Foundation, 1997). The role played by PHARE funding can be best illustrated with reference to an example, such as Latvia. In 1994-1996 the PHARE programmes in Latvia were funded at the level of 5.5 million Euros (approximately the same amount in dollars at today's values). These programmes aim to support the initial modernisation and reforms of the vocational education and training system in the areas of curriculum development, teacher training, upgrading of teaching equipment, partnership with EU schools, education policy development and the dissemination of results. One of the programmes refers to the post secondary area in business and adult education. The focus on initial vocational training in the public sector is notable, and does not address the problem of establishing HRD policies for those in employment, or seeking employment in adult life. In the PHARE context, the EU emphasis on open and distance learning should be stressed. As already indicated, one of the issues coming out of the research, and further described below, is the lack of emphasis in former communist countries on methods of learning for adults which are not classroom based. The European Training Foundation is well aware of this problem and is now managing the PHARE Multi-Country Programme in Distance Education. This programme aims at promoting co-operation in the area of distance education among the PHARE assisted countries, including the promotion of co-operation between the PHARE region and EU member states. The programme will specifically support the establishment of trans-regional distance education infrastructure and the development of a substantial portfolio of distance education and training courses in the PHARE countries. National distance learning centres have been designated in each of the relevant countries, with a modest operating budget. Funding became available in 1997 for the development of distance learning course modules with an indicated budget of 4 million Euros (European Commission, 1997).

The literature reviewed above, further uncited sources, visits to some of the countries mentioned, and visitors from some of these and other relevant countries, have raised the three research questions listed at the beginning of this paper above other HRD related issues. While these data sources offer some insights and possibilities in the search for answers, the greatest help has come from research I have conducted with colleagues in the Baltic States and Slovenia. This has been carried out in the context of the LEONARDO Da VINCI Programme, which is a major initiative of the European Commission concerned with the improvement of initial and continuing vocational training in the EU countries. The research was conducted because this Programme is opening up to the pre-accession countries of Central and Eastern Europe. All of these countries are expected to face challenges in implementing this complex and demanding programme. The research was carried out to determine the state of readiness of the Baltic States and Slovenia to enter into this programme, and the priorities which should be addressed in terms of the HRD needs of these countries. A full and lengthy report of this research has been submitted to the European Commission (Chivers et al, 1997) and the next section summarises the empirical research strategy without revealing confidential details.

Given the way that data has accrued, some well before the broad research questions above were formulated, then the research approach is best described as inductive and drawing on the grounded theory model of Strauss and Corbin (1990). These authors hold that in complex areas of study involving many variables, and which initially are poorly perceived, researchers should not begin with a theory, and then try to prove it. Rather, they should begin with a broadly based inquiring approach, which is modified iteratively as data is collected and meaningful patterns can be determined from it. Thus, in this study, early involvement with vocational learning issues in Central and Eastern Europe indicated to the author that much was awry, but there was no initial clarity about the specific problems to address from a research viewpoint.

Empirical research in the Baltic States and Slovenia

The European Commission announced in Spring 1996 that a consulting team was sought to investigate the issues arising from the proposal to introduce the LEONARDO Da VINCI Programme in the Baltic States and Slovenia. A bid for this contract was prepared by myself and colleagues from the Division of Adult Continuing Education, University of Sheffield, in conjunction with the consultancy company UNECIA, which is a not-for-profit organisation based on a consortium of English universities which includes the University of Sheffield amongst its partner institutions. The bid was submitted by UNECIA in the summer of 1996 and proved successful in competition with many other bids.

The overall project involved six consultant researchers, including and overseen by myself, visiting the four countries for short periods (typically 3-5 days). A very large number of interviews were conducted by the researchers in these short periods, these being organised by the facilitators of the project in the four countries. These interviewees were mainly government civil servants with a strong background in vocational education and training. The interviews were usually carried out on a 1:1 basis in the premises of the person being interviewed, unless there was a need for an interpreter. Although a wide variety of experts from a large number of different organisations were interviewed, it was agreed that a semi-structured interview approach would be employed, utilising a standard set of 16 questions, followed by an open ended discussion. For the most part this procedure was followed, although some variation was necessary due to the behaviour of the interviewees. For example, some interviewees found certain questions irrelevant to their organisations, while others gave lengthy responses to early questions which in effect answered later ones.

The interviews were generally conducted over a 30-40 minute period, although some important figures were spoken with at greater length. The question responses were recorded as brief notes for each question, against each number, while an open ended discussion was summarised in writing and everything checked back with the interviewee at the end of the interview.

The interview questions moved from very general ones concerning the interviewee's definition of vocational education and training (VET) to their awareness of VET priorities in their country, through to their own current and proposed VET activities, and then to questions specific to the technical aspects of the LEONARDO Da VINCI programme and how it would benefit the country and their organisation.

The number of people interviewed in each country, and the nature of their organisations varied from country to country, partly due to the national circumstances but also because of the extent of preparation work carried out by the national facilitator. In Latvia for example 63 people were interviewed, with interviewees ranging from Ministry of Education officials, to university rectors and heads of vocational colleges, to staff of the Employers Confederation and the Chamber of Trade and Commerce. In Lithuania interviews with 48 people were conducted, covering a similar range of organisations. In Estonia 43 people (or in a few cases, groups of people) were interviewed, with a stronger focus on private sector employers and employers' organisations (as there are more of these in Estonia). Only 11 individual interviews were conducted in Slovenia, where there was more reliance on extensive reports in English, and focus group discussions with teams of staff from employing organisations.

The interviews and meetings produced a large volume of recorded data, which was written out more clearly on laptop computers during the country visits, and then brought back to the UK for analysis. The analysis was conducted on a country by country basis by those researchers who had undertaken the visit. The outcomes of the structured parts of the interviews were considered on a question by question basis, while the statements recorded in the open ended discussions were read and re-read for key content until meaningful patterns and correlations were established.

Additionally, a large volume of reports was consulted, involving the national facilitators and colleagues in a great deal of translation work.

The draft reports were submitted to myself as research director, and I then read these and interviewed the visiting researchers to ascertain their own views and impressions. Where I was a researcher, I discussed my views on the visits undertaken with the other researcher who accompanied me for verification. All the researchers read the reports of the other research teams and raised points of clarification or concern.

I wrote the final report based largely on the findings of the country research teams, and this was checked by them and then submitted by UNECIA to the European Commission in June 1997. This report identified a large number of VET issues and needs in these countries, but nevertheless took a very positive line in terms of the possibilities of the LEONARDO Da VINCI programme operating effectively and beneficially in all the countries.

Following further development work in the Baltic States and Slovenia, these countries entered the Programme in 1998, soon after other pre-accession countries such as Poland and Hungary and the Czech Republic. Spin off work from this major research project has been conducted in Latvia and typifies the kind of ongoing development work I am conducting with partners in the pre-accession countries (Buligina and Chivers, 1998).

As well as generating a mass of detailed findings and recommendations, these formal studies are able to verify general overall impressions gained by the author from visits to these and other Central and Eastern European countries, attendance at conferences in these countries (and in Western Europe involving researchers from the pre-accession countries), and discussions with visitors to the University of Sheffield from these countries. The only relevant country with which there has been no direct face-to-face contact with national experts on VET is Slovakia. It should be noted that the author has also worked extensively in the east of Germany since 1989, in the context of vocational and higher education reform, retraining of the unemployed, and economic regeneration via small firm initiation and development.

The research results and findings reported below draw together the empirical data from the LEONARDO Da VINCI survey, with the author's reflections on all the contact he has had with VET and HRD experts in the pre-accession countries, and all the papers, reports, institutional brochures and other documents I have read about this subject over the past decade.

Research results and findings

It is notable in all the former communist countries that many features of everyday life remind one of Western Europe in the 1940's, despite the computers appearing on office desks and the televisions in many homes today. The communist 'command economy', and the almost total absence of commercial competition made for slow progress on all fronts. While this is most immediately noticeable to the visitor in terms of the state of the roads, the dearth of telephones, and the poor service in restaurants away from the capital cities, in fact the lack of change is most noticeable over time in the mentality of local people. Driefelds (1996, p11) argues that many people lived under regimes which went beyond authoritarianism to totalitarianism.

> "The most relevant distinction lies in the extensiveness and depth of the structural penetration of society by the state, and the almost total absence of independent organisations."

Unless people have lived in the West, or had a lot of contact with Westerners in their own country, their whole outlook, beliefs and values are likely to be closer to those of people in the 1940's in the west, rather than westerners in the 1990's. There is of course wide country to country variation, with some regions, such as the Baltic States, having been much more influenced by the extremes of the Soviet communist system. (Driefelds, 1996). Although people are well aware of how different life is in Western Europe (let alone North America), and although they want to introduce the changes which will allow them to rapidly catch up and lead a modern, affluent life, they are much less aware of how out of step their mentality is from ways of thinking in the West.

The majority of people in Central and Eastern Europe for example still think in terms of stable employment patterns, despite the evidence in front of them of collapse of whole industries, and widespread unemployment. These are seen as aberrations arising from the collapse of the communist system rather than features of the global economy. In consequence, the state education and training systems are still geared to the development of young people for a stable labour market. To a considerable extent young people are still being selected and developed to undertake jobs that no longer exist in their region, and will doubtless never return. In other cases they are being developed to slot into specialist jobs which are predicted to be needed in the new, capitalistic future. In reality these jobs may never materialise, or will take a different form in terms of knowledge and skills needed from what was predicted. Trying to come to terms with strategies for initial education and training to prepare young people for an unstable and constantly changing labour market is difficult enough in the West, but is proving beyond the powers of imagination and creativity in some former communist countries as exemplified by Velkovski (1995).

Within work organisations there is rarely a recognisable human resource management function, (HRM), let alone an HRD function. In communist times the state sponsored trade unions looked after the welfare of workers in terms of working conditions, organised recreational activities in work groups, and pension rights. In the absence of wage negotiation responsibilities, the trade unions were able to devote their efforts in these directions and offered much group and individual advice and support. Management was not therefore required to interest itself in personnel matters (Ardagh, 1988).

When the communist system collapsed the trade unions also disappeared leaving a void in the people management area. In this situation it is hardly surprising that few companies have any recognisable HRD function, and there is much to do in building both the HRM and HRD functions in the pre-accession countries.

Further difficulties arise because of the ranking of science as a discipline above all others. This results in the most academically able young people being geared towards the study of mathematics and science (especially the physical sciences), in schools which specialise in these fields. Senior positions in academic life are held by scientists to a great extent, which further unbalances the education and training systems in societies where the study of psychology, sociology, as understood in the West, and western languages was discouraged. The vast majority of senior policy makers in government are also physical scientists and technologists by background, which limits their interest in, and understanding of HRD (Driefelds, 1996, p 129).

In regard to the learning needs of the adult population, these were seen in doctrinaire terms, and most continuing education provision was influenced by communist ideology. Vocational learning for those at work was seen as readily achievable in the workplace, because of the very slow rate at which job tasks changed. Retraining was rarely necessary since workers rarely changed their jobs, and certainly not their vocation. Higher professionals were exceptional in this respect, either because they were more influenced by scientific developments, or because of the need for them to have contact with the West. Even for such professionals, however, their further learning was more likely to be in the context of their advancement in the Communist Party rather than the direct needs of their professional work.

In the totally planned economy, young people were told what their work would be and where their job will be located, followed by many years of service with the same employer. Hence the need for human resource management at the company level was limited. HRD was an alien concept because there was no perceived need to purposefully develop workers, given that their work was not expected to change, and they were discouraged (or forbidden) from changing jobs, moving to another area for new work, etc. Even where the state allowed young people to choose their own career field and first job there was little scope for later career change (Ardagh, 1988, p 329).

Indeed, it has proved difficult to convince senior managers of organisations, and even senior educators that older workers are actually capable of significant new learning. This is especially notable when the learning need is seen to lie in the affective domaine. There is a deep belief in Central and Eastern Europe that interpersonal behaviour for example is unchangeable, and many well educated people would be sceptical of proposals for any HRD programme that is focused on behavioural change in this context. Autleytner (1999) states that in Poland:

> "Education for adults is a great but underestimated problem. Under communism it was assumed that a university diploma was lifetime insurance."

Equally problematic in the HRD context is the deep seated sexism and racism which abounds in Central and Eastern Europe. Again, in listening to discussions between local people the author has been much reminded of conversations between the older generations when he was a boy, when the strengths and limitations of people were seen as strongly bounded by their gender or ethnicity. Clearly the strongly affirmative equal opportunities assumptions embedded in Western HRD approaches today will struggle to find fertile ground in the former communist countries. The recent wars in the Balkans, and the treatment of minorities in many Central and Eastern European countries are testament to such deep seated attitudes.

Turning to teaching and learning methods, the very strong emphasis on didactic classroom based teaching is clearly related in part to the 'old fashioned' nature of society, alluded to above. Didactic approaches to teaching and learning at every level, from primary schooling, to company training and university teaching also held sway until recently in the West. Deference to authority was doubtless strongly established in the former communist countries, and respect for age, experience and wisdom a value that some in the West would appreciate today! In such respects these countries could perhaps be compared with the countries of South and East Asia, where didactic teaching methods still hold sway. In any education and training environment, reverence for the role and the power of the teacher will at least sustain, if not encourage, didactic teaching methods, and there is a big challenge to teacher and trainer educators to bring forward new learning methodologies through the next generation of teachers and HRD professionals. The new technologies are seen by younger people as exciting and certainly open up a window to the West. The first need is to convince policy makers and practitioners in the HRD field that people can learn well using computer based approaches, and be self-directed in their learning.

A further challenge will be to convince workers that important vocational learning needs to be carried out on an individual basis as well as in collective work groups. Such thinking cuts across the 'group activity' approach entrenched under communism. Trying to 'get ahead' of workmates by individual learning effort can still be seen as anti-social. As recently as 1987, Ardagh (1988, p332) was reporting on East Germany that:

> "In other words, under their teachers' supervision these young people are set to watch and assess each other, in a manner that certainly militates against non-conformity."

This past history makes the introduction of open and distance learning difficult, although the glamour of the new technologies is clearly a countervailing force here.

Conclusions and recommendations

Currently, a great deal of money is being spent in Central and Eastern Europe to develop and modernise the state education and training systems in the hope that the next generation of workers will be ready to transform the political, social and especially the economic circumstances of each country. Much hope is being placed in the introduction of new technologies, and indeed it is true that experiential learning via computer use offers much hope for the future.

However, it is necessary to challenge very traditional thinking at all levels of society about: the nature of work; its organisation and transformation; the purposes of education; how differently people learn best; the affective domaine of learning; lifelong learning in and for work as well as for the good society; and power relations in the learning context.

As part of this challenge to change overall thinking, there is a challenge to western HRD professionals to demonstrate to senior managers in all kinds of work organisations the worth of HRD professionals, and the added value from developing the workforce on a continuing basis. Undoubtedly there is an important role for western companies based in Central and Eastern Europe, and who have a well developed HRD function, to share their expertise with local company managers. There needs to be much more emphasis on bringing potential HRD managers from Central and Eastern Europe to the West for work placements alongside experienced HRD professionals. Educators and trainers in the public services need much more development to gain expertise in modern approaches to vocational learning, and a remit to develop learning programmes of benefit to small firms in their respective countries. The infrastructure for general adult education also needs to be rebuilt in many countries, and lifelong learning strongly promoted.

Western HRD professionals acting as consultants and advisers in Central and Eastern Europe require further development to gain deeper appreciation of the effects of 45 years of communism on the mentality, beliefs, values and behaviours of managers and workers in all kinds of work organisations in the relevant countries.. Throwing money at education institutions, and tinkering with curricula will have little effect long term if there are no real changes in the mentality of stakeholders in learning developments. This is clearly demonstrated in the case of Russia, where the problems discussed for the countries of Central and Eastern Europe are much more deep seated, and where major efforts are yielding poor returns (Adamson, 1999).

An old adult education adage is to 'Start where the learners are'. Open and distance learning systems involving computer conferencing and the Internet mean little to workers who have no access to computers in countries where a very average modern personal computer costs the average yearly wage of an industrial worker. Western management development courses for senior managers will have little meaning to senior industrial managers who were used to taking their daily instructions from Moscow, with no more autonomy than Americans would think normal for a shop floor supervisor. The more well meaning Westerners can understand how it was under communism, then the more help we can be to make a better tomorrow for our highly educated, hardworking, committed and long suffering colleagues in Central and Eastern Europe.

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Human Resource Professional Support for Work-Based Management Development

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This paper reports on some of the findings of a recent research project investigating senior human resource professionals' awareness and encouragement of 'work-based' management development. The main findings were that HR professionals were very enthusiastic about 'work-based' development, but were not well-informed about the forms that this could take; were uncertain about the acceptability of using developmental challenges; and did not have conscious strategies for support, guidance, and facilitation of learning through work-based activities. The implications of this are discussed within the context of implementing strategically-focused management development.

Keywords: Human Resources, Work-based, Development

In as much as it is possible to generalise, since the mid 1980s, the consensus is that in the UK, organisations are more aware of the strategic significance of management develeopment (albeit that this does not indicate a full integration within organisational strategic management processes) and more managers are involved in management development activity as measured in the number of 'off-the-job' training days. Constable and MacCormick, 1987; Handy, 1987; Institute of Management, 1994a; Institute of Management, 1994b; Thomson et. al., 1997).
However, this is being supported by smaller in-house management development teams aided by greater individual responsibility for self-development, and greater use of external management development consultants and flexible learning support. Finally, it is generally agreed that a larger proportion of management development activity is being undertaken on-the-job, and it is this issue which is of main concern to this paper. The popularity of work-based learning activities has been boosted by a number of business environment pressures and public policy initiatives. The identification and effective use of work-based learning opportunities have become essential means of underpinning corporate strategies of human resource development which emphasise competence-based development, organisational learning, personal development planning, self-development, and development for 'employability' within new psychological contracts. Growing flexibility of job roles means that continuous learning is more likely to take place through experiences at work.

The Research Problem

The problem is that although there are many studies exploring the relationship between work-based development and the HRD interventions mentioned above, we have little information on the extent to which those responsible for management development within organisations are actively encouraging and supporting work-based management development. The questionnaire surveys of respondents drawn from the Institute of Management membership database (supplemented with limited face to face or telephone interviews with senior HR personnel) present problems in terms of an appropriate research design, namely: lack of clarity and consensus over what constitutes 'on-the-job' or 'work-based management development', a tendency to focus upon formal developmental experiences; and a questionable assumption about the ability of individual respondents to provide reliable responses for their organisations (Woodall, 2000, forthcoming). In particular, the views of senior HR professionals responsible for management development appeared to be under-researched. If claims about organisational commitment to management development in the UK are to be authoritative, research may need to give more attention to the 'architects' of management development within organistaions, namely HR professionals plus other managers with this responsibility. Their perspective on the purposes and content of management development activity, within the wider HR policy and organisational context are central to understanding the scope and place of work-based management development.

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Theoretical Frame

The research design attempted to go beyond defining management development in terms of formal interventions, be they either 'off-the-job' or 'on-the-job' (see Table I). It drew upon the substantial US research in the field of adult learning, human resource development, and career development to generate a more inclusive set of workplace opportunities. With the exception of earlier work by Davies and Easterby-Smith (1984) and Burgoyne and Hodgson (1983), most of the research on how managers might use work-based learning opportunities originates in the US (Dechant, 1994; McCall et al, 1988; McCauley et al, 1994, 1995; Marsick and Watkins, 1990, 1997). To date, very little of this has been assimilated within UK research on management development.

Table I An overview of work-based development methods

Method	Learning Process
Learning from another person	
Coaching	Feedback, reflection, challenge
Mentoring and sponsorship	Support, advice, feedback, opportunity, challenge
Role models	Observation, reflection, imitation
Learning from tasks	
Special projects	Problem-solving, taking responsibility, taking risks, making decisions, managing without mastering
Job rotation	Exposure to other cultures and views
Shadowing	Observation of new tasks, techniques, skills
Secondment	Exposure to other cultures and views
Acting up/delegation	Trial of new tasks, techniques, skills, and challenges
Learning with others	
Task forces/working parties	Strategic understanding, building awareness and confidence
Action learning	Problem solving, interaction, influencing
Networking	Interaction and building awareness

Source: J. Woodall and D. Winstanley. 1998 *Management Development: Strategy and Practice*. Oxford: Blackwell, p. 187.

Marsick and Watkins (1990, 1997) drew attention to individual ability to learn from 'trial and error' in everyday tasks and interactions, but at the same time argued that organisations needed to support individuals in maintaining an openness towards new experiences and perspectives, in disciplined reflection, and in translating learning into practice. Other research would emphasise the importance of providing support in critical reflection (Brookfield, 1987; Mezirow, 1991) or 'guided reflection' (Wood-Daudelin, 1996) as a means to get individuals to challenge their own underlying frameworks of assumptions.

Conversely, McCauley et al (1994, 1995) take a 'tough love' approach when they argue that on-the-job learning is most likely to occur when managers are faced with challenging situations which place them in dynamic settings full of problems to resolve under conditions of risk and uncertainty. Their empirical research based upon the fifteen item 'Developmental Challenge Profile' (McCauley et al, 1995) which identified a number of developmental components of managerial jobs encountered in work situations involving transition, creating change, high level responsibility, non authority relationships and obstacles. They found that the degree to which managers are exposed to the developmental challenges was dependent upon a combination of personal qualities (a proactive 'self-starting' managerial style was advantageous), gender, job-related tasks (such as special projects, tasks for membership, job-rotation, cross-functional teams and internal secondment) and work-context.

Research Questions

The research reported on here was commissioned by the Institute of Personnel and Development, and conducted during 1998. It focused on human resource manager perceptions and experience of using work-based management development as part of their overall organisational management development policy. The underlying assumption for this research design was that corporate support for work-based management development would depend largely upon HR professionals' awareness of the range of development interventions and the support required. In the absence of this it could be assumed that the managerial workforce would be unlikely to make effective use of this way of learning. The main research questions were:

- are senior HR and management development professionals fully aware of the whole range of formal work-based development activities (see Table I) plus the possibility of informal and incidental learning?
- do senior HR and management development professionals recognise the significance of developmental challenges (see Table II) as a means of learning?
- how aware are senior HR and management development professionals of the need for organisational support and resources for guidance and facilitation of such learning?
- and what do senior HR and management development professionals perceive to be the main factors and obstacles to effective work-based management development?

Research Design and Methodology

An interpretative research design was used (see below), with a purposive sample of organisations judged by a panel of experts (officers of the UK Institute of Personnel and Development, plus other academic researchers on management development) to be confronted with radical change in their business environment of a magnitude that would encourage them to give particular attention to management development. In addition the original intention was to ensure a broad spread of organizations across different sectors: information technology systems and software development, retail, leisure and tourism, financial services, engineering and public services. and to include some SMEs employing 50-199 employees as well as larger employers. Problems of access were only experienced in the IT sector as a number of organisations were in the process of introducing radical structural change and so were understandably reluctant to participate. Also, in the end only four organisations with 50-199 employees were included, and organisational size by employment ranged from a food retailer with 130,000, four organisations employing between 40,000 and 60,000, eight employing between 5,000 and 25,000, and a further eight employing between 1,000 and 5,000. The remaining were five medium sized organisations employing between 200-999 employees - a total of 31 organisations. All the organisations were given pseudonyms to maintain confidentiality (see Table II)

Table II Organisations Participating in the Research

Company (by sector)	Numbers employed	Company (by sector)	Numbers employed
		Financial Services	
Retail		RFSO1	50,000
Familystore	1,300	RFSO2	52,000
Cosmetico	2,000	Insuranceco	7,800
Superco	130,000	Big Six	7,500
Bookco	13,000	AC1	600
Qualitystore	17,000	AC2	350
Leisure and Tourism		**Engineering and Construction**	
Fast-eat	40,000	Oilexplore	25,000 (UK only)
Fitco	1,700	Oilenge	60,000 (worldwide)
Museum	800	Paperco	4,500 (UK); 19,500 (worldwide)
Theme-eat	180		
Theme Park	200	Constructco	5,000 (worldwide)
		Marinenge	200 (UK)
		Boxenge	28
Public Sector			
Government I	3,500 (plus 46,000 in agencies)	**Information Technology**	
Government II	25,000	Infotec A	2,000 (UK); 4,000(worldwide)
Government III	37,000		
Trader	1,000	Infotec B	20
South County	25,000		
NHS Trust	3,800		
CCT	100		

Data were collected by semi-structured interviews with key informants. These were senior HR managers responsible for devising management development policy for their organization - or other members of the senior management team who held this responsibility. The interview schedule was designed to collect basic factual information about management development activity for middle and senior level management (supervisors and first line managers were excluded), as well as key informants' perceptions around a number of themes, including:

- major business issues of current strategic concern
- the overall aims and principles underpinning management development policy
- the formal elements and framework for delivering that policy including succession planning arrangements
- awareness of a range of formal work-based management development activity (see Table I), and the extent to which these were encouraged and supported
- recognition and encouragement of the potential to learn from developmental challenges (see Table II)
- support for managers and line managers in identifying, using, and reflecting upon such development opportunities

This paper reports on findings relating to the last three points: namely the awareness of the range of work-based management development activity and support for this. Work-based development was defined as:

> *development that occurs in the course of or as a consequence of the real work activities that constitute a manager's job role.*

The interviews took place in 1998, and were supplemented by analysis of documentation supplied by the organisations, including management development policy statements, and frameworks for delivering support, competence frameworks, learning support materials, and performance appraisal documentation.

Most interviews lasted an average of 75 minutes, with some very much longer, and a couple just under 60 minutes. In five organizations the research team interviewed more than one respondent, and in three of these, senior HR and management development professionals were interviewed together. Interview transcripts were compiled immediately after each interview. Although the semi-structured interview schedule provided a template for reporting responses to the more open questions were scrutinised to identify relevant units of data. These were then organised into themes. Both members of the research team participated in independent review of the interview transcripts, in order to identify relevant themes and units of meaning, and subsequently to confirm analysis of the findings by sector as well as in general. The aims were to follow the conventions of qualitative data analysis that would meet the criteria of credibility, transferability, dependability, and confirmability (Lincoln and Guba 1985: 316; Denzin and Lincoln, 1994).

Findings

HR Professional Awareness and Use of Work-Based Development Interventions

There appeared to be tremendous enthusiasm for management learning from everyday work activities: *It's almost the only way there is'* ('Quality store') *the most important vehicle for learning* (RFSO2) *hour-for-hour you get much more from work-based activities than you do from going on a course* (Marinenge)

However, when pressed, most respondents were unable to elaborate upon what this might involve, and conceded that it was left to chance: *We do it by chance, rather than in a planned and recognised manner* (Family Store) *It is a question of trying to get people to think in terms other than courses for management development* (Museum)*It has happened, but it has been done by default* (Superco) *It's limited - things are happening, but people are not learning* (AC1)

When asked about which of the most commonly recognised forms of formal work-based management development (see Table I) were consciously promoted, most respondents only identified coaching and special projects. Role models, shadowing, mentoring, and secondment only received indirect encouragement. Acting-up (deputising for a manager in their absence) and delegation were not perceived as developmental tools, but rather as operational necessities. Job rotation and Action Learning were seldom used (many respondents were unfamiliar with the latter). Coaching was seen as the key work-based management development intervention by almost all those interviewed (with the exception of some public sector organisations and one organisation in engineering and construction), but explicit guidance on using both coaching and special projects was rare. Surprisingly, HR professionals responsible for management development were often unclear about what other work-based management development tools might be used, and when and how to use them.

HR Professional recognition of the Significance of Developmental Challenges

There was little immediate recognition of the development potential of both positive and negative challenges (see Table III) that commonly arise in the course of everyday work experiences: *We are still in our infancy - we are trying to encourage more of such learning* (Bookco); *The trouble is that many of these are not perceived as learning opportunities. People do not think about the opportunities and career development created in handling a mature, declining business.* (Paperco); *All (developmental challenges) stretch in different ways, confronting traditional assumptions about how people learn...crisis situations demand challenge - having to solve problems that individuals have not come across before. Things spin off from what they are doing day-to-day and stretch them* (Big Six)

Table III The developmental potential of positive and negative challenges: the perceptions of senior human resource professionals responsible for management development

Challenges that are most developmental	high profile responsibility
	developing new directions
	unfamiliar responsibilities
	influencing without authority
Challenges that are unwelcome operational responsibilities	dealing with inherited problems
	making decisions on cutbacks
	dealing with difficult/incompetent employees
	managing a diverse area of work
	handling a high workload
Challenges that are definitely not developmental	handling adverse business conditions
	dealing with a lack of top management support
	dealing with a lack of peer support
	handling a difficult boss

Not a single organization specifically encouraged learning from developmental challenges, although many HR and management development professionals admitted that on reflection they could cite examples of learning in this way. A pattern emerged whereby the most positive challenges of 'high profile responsibility', 'developing new directions', 'unfamiliar responsibilities', and 'influencing without authority' were more likely to be perceived as developmental. The more negative experiences ('dealing with inherited problems', 'making decisions on cutbacks', 'dealing with difficult/incompetent employees'. 'managing a diverse area of work', 'handling a high workload') were seen as unwelcome operational requirements of the job. There was near universal agreement that obstacles such as 'handling adverse business conditions', 'dealing with a lack of top management support', 'dealing with a lack of peer support', and 'handling a difficult boss', were most unlikely to be developmental (see Table III).

Provision of Support, Guidance and Facilitation for Learning through Work Activities.

The HR and management development professionals were questioned in depth about organisational arrangements for support, guidance, and facilitation of such learning. While this involved consideration of the use of established HR tools such as personal development plans, learning contracts, learning logs and diaries, plus other examples of guided reflection, the scope of enquiry extended into wider aspects of HRM policy and practice and organisational culture. In many cases these factors did not provide an encouraging environment for work-based management development. *'People's expectations are built around upward promotion, but because of the flatter organisation, development has to be in and around the job....where managers are under a lot of heavy pressures, it can be hard to get people to use developmental tools - development of individuals tends to take second place...'* (Oilexplore); *we are an aggressive, demanding organisation in terms of time* (Paperco); *this organisation does not look at what individuals have put into a job - as long as they achieve their objectives, we don't look at other things'* (Government II).;*'we are an organisation full of activists and pragmatists, with few reflectors - it is very difficult for* *the latter to operate and be valued'* (South County); *'as a culture, we are the least reflective organisation I have met in my life - there is a constant focus upon active learning* (Cosmetico); *'in the past five years we have moved from a 'done-to' culture, and now it's more of the 'if it's to be it's up to me' culture'* (RFSO2).

Most organisations made use of personal development plans, but this was usually as a follow-up mechanism to a formal off the job development programme or as part of a competence-based approach. Yet there appeared to be little facilitation of PDPs, and few resources devoted to supporting guided reflection: scant use was made of learning logs and diaries, personal development planning workshops or individual development counselling. Espoused learning cultures of self-development (see below) were not embedded, and unless there was regular follow-up activity on the part of both line managers and HR and management development professionals, it was readily admitted that such instruments as PDPs, learning logs etc. would rapidly fall into disuse. Action learning was perceived as a useful means of encouraging learning from developmental challenges in two public sector organisations ('South County' and 'NHS'). Some organisations in the public sector ('Government II', 'South County', and 'CCT'), plus others in engineering ('Oilexplore', 'Oilenge') provided encouragement for mentoring and networking

The wider HRM policy environment appeared to be an important factor. The general trend towards slimmer central HR teams, aided by internal HR consultants in business units within a framework of devolved responsibility, had limited both the availability of HR and management development professional support. In particular, facilitation of work-based managerial learning by developing the awareness and skills of line managers, and the ability to control implementation of central policy was reported to be severely constrained. Every respondent cited lack of time as the key-limiting factor in providing support. In addition managers in delayered organisations were perceived to be more cautious and risk-averse, and reluctant to take on negative challenges (see Table IV) which provide potentially rich learning opportunities. Also, the ratio of the managerial workforce to other employees was an indication of how much time and support were available for management development. Small managerial workforces in leisure and tourism, contrasted with the higher ratio of managers to employees in retail, financial services, the public sector and engineering and construction.

Furthermore, other HR policy developments can obstruct work-based management development. This is particularly true of performance management systems. A focus upon tasks, objectives and outcomes gives priority to short-term considerations, and squeezes out long term development. This goes a considerable way to explaining the poor record of line managers in facilitating the development of their direct reports. Line managers may potentially have a key role in assisting development through providing an opportunity for debriefing and guided reflection, but with little training in coaching skills, and a strong signal that meeting targets is the priority, this is unlikely to show the desired result. There was only patchy evidence of the use of separate development reviews (mainly in the IT, retail and public sectors), and training in development skills for managers was only noticeably in evidence among retail and public sector organisations. Elsewhere in financial services organisations, it tended to be narrowly focused upon conducting appraisal and personal development plans. While obviously this is significant for the rest of the workforce, it is particularly important in respect of the development of junior and middle managers.

Another HR process that can obstruct integration of work-based management development within the wider HR policy environment is succession planning. Nearly every respondent acknowledged the importance they attributed to succession planning, but in the same breath admitted to current shortcomings. The most sophisticated succession planning systems were to be found in 'Superco', 'Qualitystore', 'Bookco', 'Big Six', 'Oilexplore', and 'NHS Trust'. Other financial services organisations ('RFSO1', 'RFSO2', and 'Insureco') also had sophisticated charting and software systems, but these were becoming increasingly irrelevant in the context of ever more frequent organisational restructuring. A similar experience was encountered by many of the central government organisations. Yet, even here it was admitted that succession planning decisions are often based on informal impressions rather than recorded information - especially that available via the personal development planning process. Although respondents recognised that the recorded experience of work-based management development potentially provides an important basis for succession planning decisions, they admitted that their succession planning arrangements made no attempt to draw upon anything more systematic than anecdotal evidence of such activity - a situation that gives concern on grounds of both efficiency and equity. Postings were usually dealt with in an ad hoc manner with strong involvement from the senior management team, and hence, image, exposure and impression management were important.

There are a number of issues that arise in respect of organisation culture and leadership style, and especially the 'learning culture' of an organisation. Many organisations had espoused a self-development culture within a competency framework, but as already mentioned, a task- or client-focused culture can inhibit individual managers from giving priority to development. It is possible that total quality management processes with a 'right first time' ethos can encourage risk aversion and discourage the use of informal learning experiences and developmental challenges which do not have guaranteed positive outcomes. In the same vein, negative learning experiences, and especially the use of negative developmental challenges might be shunned as unacceptable within a positive learning culture. That 'dealing with inherited problems', 'making decisions on cutbacks', 'dealing with a lack of top management support', and a 'difficult boss' (see Table IV) might be developmental given appropriate support was inconceivable even in organisations which were highly committed to work-based development (Quality Store, Oilexplore).

Finally, two other aspects of learning culture are relevant. Many organisations were so task-focused that the use of time to reflect on learning was perceived as an indication of individual underperformance! Only in the large accountancy practice (Big Six) was there an awareness that line managers needed to provide an opportunity for reflection and debriefing upon experience, in order for learning to take place, but even there, access to certain developmental challenges was highly dependent upon seniority and experience. Other organisations (especially in retail financial services and the public sector) were making the painful transition from a passive to an active learning culture. Management styles, in certain industries - especially the leisure industry were far from empowering, and a transactional 'tell' leadership style constrained the ability of managers to take advantage of work-based learning opportunities, as did a lack of senior management commitment to learning.

Conclusion

It was quite clear, that senior HR and management development professionals were enthusiastic about work-based development. There was overwhelming evidence that they thought that the workplace was the most important place for management learning. Yet, even where a high level of professional expertise might be expected, there was little awareness of the full range of formal work-based interventions and potential developmental challenges that could be used and little systematic promotion and support for this way of learning - learning in the workplace was expected to 'happen' as a consequence of individual managerial work on personal development plans. This increased reliance upon work-based learning as a key component of management development policy does not sit easily with the lack of active promotion and support. It certainly begs the question of whether more managers are actively self-developing and making effective use of work-based learning experiences in the absence of opportunities for guided reflection.

The are also wider implications for the strategic role of management development. Even if it is conceded that management development is seldom well integrated with wider corporate strategy, it is even doubtful whether it is well integrated with other HR processes, especially performance management, and succession planning. Contrary to recent research (Armstrong and Barron, 1998), development processes may be suffering in the context of integrated 'all-singing-all-dancing' performance management systems, and the failure to rethink succession planning in favour of a bottom-up 'developing potential' approach (Hirsh, 1990; Hirsh and Jackson, 1995) is indicative of weak internal HR policy integration.

Both of the above points have important implications for HR professionals who are responsible for management development. Firstly they need to be made more aware of the full range of work-based management development interventions, including developmental challenges, and how this relates to informal and incidental learning. Secondly, if greater reliance is to be placed on work-based management development as part of organisational management development strategy, then HR and management development professionals need to assemble the resources required for support and facilitation. In particular, more management development specialists will be needed, working either as internal or external consultants to line managers, offering support in coaching skills, running personal development planning workshops, and providing confidential individual development counselling. Finally, HR professionals need to scrutinise other aspects of HR policy and practice (especially performance management and succession planning arrangements) to ensure that they compliment and do not impede the effectiveness of work-based management development. Performance management systems are needed that create the space for separate development reviews with sufficient time for reflection, and which have as a key performance indicator evidence of line manager facilitation of the development of their direct reports. Similarly, without resorting to excessive bureaucratic record keeping, succession planning that draws upon more valid and reliable evidence from personal development plans is to be encouraged.

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Leadership Development as Transformative Pedagogy

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The pace of change in society and its institutions is contributing to an increasing sense of uncertainty, ambiguity within organizations. In this context, leaders increasingly struggle, as change forces them to continuously choose between detachment and meaninglessness or "deep change." Choosing the former represents a slow death of the self and possible organizational disintegration. To address the demands of this highly tumultuous context, leadership development needs to be grounded in the notion of deep change in one's self, as well as in the organization. Relatively few studies, however, have focused on the pedagogical environments which seek to foster the "inner work" or transformative learning implied in this form of change. In this qualitative study, we examine the nature of such instructional environments, focusing specifically on the dynamic interplay among the teachers' beliefs, the learners' experiences, the content, and the instructional methods. The findings suggest five themes which characterize the instructional environments studied, in which participants construct, through myths, rituals, imagination, and creativity, a "metatext" which mediates the inner work of leadership development.

Keywords: Leadership Development, Transformative Learning, Instructional Environments

Fueled largely by rapid advances in technology, organizational leaders are confronted with escalating rates of change. While the most obvious of these changes is the decay of instrumental knowledge, advances are also bringing about dramatic change in personal, social, and cultural dimensions of organizational life. They are effecting how individuals understand their lives in and out of the workplace, how they define their place within the organization and within society, and how they relate to one another as people and as co-workers. These changes are sending shock waves through our culture, disrupting and calling into question long-held values and core beliefs, and luring us into roles of the powerless victim or passive observer (Quinn, 1996). To allow ourselves to be drawn into these roles, however, contributes to an increasing sense of meaninglessness and suggests a slow death of the self, manifest in feelings among professionals and organizational leaders of being disillusioned, overwhelmed, tired, worn down, or "burned out." This problem, however, extends beyond the inability or unwillingness of individual leaders to cope with this level of change. As Quinn (1996) points out, this notion of slow death of the self eventually results in a gradual disintegration of the organization.

The rapid pace of technological, social, and cultural change is bringing about a need for "deep change" at both the individual and organizational level. This notion of deep change implies a different way of thinking about leadership development, one that stresses inner work (Palmer, 1998) transformative learning (Cranton, 1996) and deep personal change (Quinn, 1996). In contrast with more traditional forms of incremental change, deep change "requires new ways of thinking and behaving. It is major in scope, discontinuous with the past and generally irreversible…Making a deep change involves…walking naked into the land of uncertainty" (Quinn, 1996, p. 3). It challenges our very sense of self-identity as organizational leaders. To engage in deep change is to enter, at a personal level, a transformative journey of profound dimensions – a dark night of the soul (Moore, 1992). Recent efforts to develop and improve leadership preparation programs represent attempts to address this context of change. Yet, these efforts seem to fall short of what is being demanded in this climate of change. For example, a number of graduate programs in educational leadership (McCarthy et. al., 1988; Murphy 1990; Tompkins 1996), as well as MBA programs (Boyatzes et. al., 1996; Porter & McKibbins, 1988) have been criticized for their ineffectiveness in developing human potential.

To prepare leaders able to engage and embrace deep change, leadership development programs need to be fundamentally grounded in the notions of inner work and transformative learning. Yet, we know relatively little about such instructional contexts or how they might be designed. The purpose of this study was to explore pedagogical practices that seek to foster transformative learning within a leadership development program. Specifically, we focused on the instructional environment and the dynamic interplay among the various elements of the instructional process, including the instructors beliefs, the methods of instruction, the content or subject matter being taught, and the learners' perceptions of their experiences.

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Conceptual Framework

Transformative learning represents a fascinating and challenging framework for understanding how professionals learn to become leaders. Theorists have pointed out the transformative potential inherent in contexts of professional development (Cranton, 1996) and, in particular, the study of leadership development. Quinn (1996) suggests that, when dealing with organizational problems, we sometimes need to alter our assumptions, rules, or paradigms and develop new theories about our surrounding environments and ourselves. To develop oneself as an effective organizational leader, Quinn argues, is to develop a new self. Quinn's notion of deep change parallels Mezirow's (1991) concept of transformative learning, which he defines as "the process of learning through critical self-reflection, which results in the reformulation of a meaning perspective to allow a more inclusive, discriminating, and integrative understanding of one's experience." Stimulated by Mezirow's (1978) provocative study of women's re-entry into community colleges, this focus on transformative learning and the need for "inner work" is reflected in other forms of professional development and continuing education as well (Cranton, 1996; Dilworth & Willis, 1999; Palmer, 1998). Integral to transformative learning is integration of the learning task with learners' biographies and experiences. Such integration provides opportunities to reconstruct meanings associated with these experiences and the contexts in which they took place. According to transformation theory scholars, this process may lead to fundamental changes in one's sense of self (Dirkx, 1998) or in broader social structures in which one's life is embedded (Cunningham, 1998).

Much of the research and theory, however, has focused on the nature of experiences and cognitive structures associated with the meaning-making processes characteristic of transformative learning (Cranton, 1994; Mezirow, 1991). For the most part, these studies have paid relatively little attention to the specific contribution that content or subject matter and the instructional methods make to the transformative learning process (Taylor, 1997). This lack of attention to content in transformative learning is curious, given its almost universal presence in educational and training programs. It is our belief that content is not merely incidental in transformative learning but can actually mediate the process of inner work, transformative learning, and deep change. In leadership development programs, this content often reflects an emphasis on concepts of leadership. Connecting these concepts with learners' lives through experience-based learning strategies can help create learning environments that contribute to meaning-making and transformation (Dirkx, 1998). Palmer (1998) argues, "[W]hat we teach will never take unless it connects with the inward, living core of our students' lives" (p. 31). The idea of transformative learning as inner work is not merely a narcissistic, me-oriented perspective. It recognizes that "the work of the world" can only be accomplished through a deep sense of personal identity and integrity. Palmer (1998) refers to this process as doing the outer work through an inner journey. O'Reilley (1998) speaks of a pedagogy that allows the spirit to come home, "to Self, to community, and the revelations of reality" (p. 3). We can only be open to the needs of the world if we are open to a deeper awareness and understanding of our selves.

To better understand how we might design and implement such environments, however, requires us to attend to critical elements of the pedagogical context (Pratt, 1997). It is this problem that shaped the focus of our study. Our focus was on developing a better understanding of pedagogy as transformative. We were interested in the dynamic interplay among instructor's beliefs, the teaching methods used, the content, the learners' perceptions of their experiences, and how these features contributed to an instructional environment characterized by a potential for inner work and transformative learning. We sought to understand the beliefs, assumptions, and values which guided the instructors' practice, and how they viewed their pedagogy as transformative. We were also interested in understanding how the text or subject matter connects in a deep way with learners' lives and how the methods employed facilitated this process.

Research Design

The context for this study was a professional development experience for individuals pursuing graduate study in educational leadership. Both instructors included in this study espoused ideals consistent with the aim of fostering transformative learning. The study utilized an interpretive approach aiming to understand actions and meanings in particular contexts (Muncey & McQuillan 1996). Our approach to this study was open-ended, allowing themes and emphases to emerge from the observations and the data, rather than specifying from the start particular relationships or expected outcomes. We began this investigation with an interest in students making sense of instructional content but, beyond that, we were not sure where our investigation would lead. An ethnographic approach was selected as the most appropriate research methodology because our focus was on the social and cultural context of instruction within a particular setting, the various ways in which meaning came to be construed, and how these meanings shaped and influenced the participants behaviors in this context. As Muncey and McQuillan (1996) suggest, our methods were not "just relying on interviews, but drawing on observational data and cultural artifacts" (p.297). Our time commitment to this context was consistent with similar ethnographic investigations of educational contexts. One of the authors immersed herself in the context, enrolling in the classes and taking field notes related to instruction on a continuous basis. This participatory approach provides the advantage of the insider's perspective on the continuity of classroom events across time. While questions of bias can be raised, we believe multiple sources of evidence address these concerns.

The setting consisted of the classroom instruction of two teachers of a graduate program in educational leadership at a large midwestern university. One of the instructors[1] is a white, middle-aged man while the other is a woman of color, also of middle-age but several years younger than her male counterpart. Both are well established in their academic careers and are well respected in their respective areas of study. Both instructors are well-known by students and colleagues as utilizing deeply engaging pedagogical practices. They described their own practices as aiming toward transformative learning. The masters level courses selected for inclusion in this study were: Organizational Theory, Leadership and Organizational Development, and Schools, Families & Communities. These courses represent a critical aspect of the leadership development program in this institution and they are exemplars of how these two professors model the patterns of transformative pedagogy in their instructional approach when teaching leadership.

Data collection occurred over nine months and included participant observation while attending all the class sessions and document analysis (syllabi, tentative agenda sheets, handout materials, students written works). In-depth interviews, lasting approximately 90 minutes, were conducted with each professor and a selection of students who were engaged in the same experience at the time. The course materials and instructional approaches were the same for all students. We used a convenience sampling of students, based on their availability at the time of interviewing. Both professors and students were interviewed after completion of the courses. All data were subjected to ethnographic analysis, examining and comparing the data embedded in the interview transcripts, documents, and observation notes in a way which allowed us to identify themes characterizing the instructional approach used by the professors. These themes, in turn, helped describe the observed instructional environment and allowed us to make some conclusions regarding its implications for professional leadership development.

Findings

Our findings are represented in five key themes which characterize these instructional settings. We will identify and briefly define these five themes. Then, through discussion of particular case vignettes, we will further illustrate their overall nature and how they contributed to the transformative pedagogy practiced by these two instructors. While we present and briefly discuss these themes separately, it is important to realize that, in reality, they are all intertwined within the complex and dynamic environment of these instructional settings.

The five themes that emerged during the analysis of data and which described key features of the instructional environments were: (a) leadership viewed as a field of inquiry, (b) opportunity for students to explore new roles, (c) presence and processing of social conflict, (d) opportunity for action and reflection on that action, and (e) the creation of myths and rituals within the learning setting. The instructors use their curriculum in a way that conveys a sense of leadership as a field of inquiry. In studying leadership, learners name and explore complex relations within their real jobs and as those relate to themselves. For example, in the class on organizational theory, leadership concepts helped learners unpack the structural, symbolic, and political frames of organizations. The instructors use these concepts as a framework to consider issues around leadership. The concepts are introduced by means of propositions structured in the form of experiential exercises, selected and ordered by the instructors so that learners' experiences in class were associated with certain concepts of leadership. Research and theory is used as a lens through which to understand and makes sense of these experiences.

The instructional context also provided participants with opportunities to experience situations in new ways. Through a variety of instructional strategies, the students encountered and lived through new roles, which often differed and contrasted with those in which they lived in their daily lives. Students' beliefs about self and their understanding of educational leadership were challenged by means of those experiences, which involved the probing of new roles. The learning environment we studied was also characterized by the surfacing and processing of conflict within the group and among its members. The instructors believe that, in a transformative environment, the experiencing and processing of social conflict by the students is critical to the whole learning experience. Their approaches stressed the need for students to experience novelty, ambiguity, and anxiety under unpredictable circumstances. The various ways in which instructional strategies were selected and used reflected this overall commitment to the value and significance of conflict in the development of leadership skills.

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[1] Although our oral agreement with the professors did not include a pledge of confidentiality or anonymity, we are using pseudonyms as the professors' names. We are also using direct quotes from the interviews.

Engaging learners in action and reflection on that action was also a critical dimension of these instructional environments. As one instructor put it, "Educational leadership is about action." If educational leadership is about doing, than it has to have a pedagogy that allows learners the opportunity "to do and reflect on their actions; in all instances, the real material of the class is as much the experience of the students as it is what their reading is." Participants were consistently involved in experiential activities, which authentically engaged them in real and concrete organizational and leadership issues. A significant dimension of their learning experiences involved reflection on and processing of the actions in which they were engaged. Finally, pedagogical practices in these contexts involved the creation of rituals and myths within the formal learning setting. Active forms of imagination, such as myth, symbol and drama, were used to surface, name, and interpret meanings associated with the learners' own work experiences, the new roles they were experiencing in this setting, and the conflicts that ensued around these active and reflective forms of learning in which they were engaged.

In the following two cases, one from each instructor's practice, we will illustrate more fully each of these themes and how they are actually interwoven within this instructional context. In this first selection, these five features of the instructional environment reflect Malcom's commitment to the use of image and symbol as a way of making sense of our experiences of leadership and what we are learning through its formal study.

Case 1: *Drama and Symbol of "Organizational Stories"*

When introducing the students to different frames of organizations in the course on organizational theory, Dr. Malcom used an approach which is described in the literature as "organizational stories" (Ochs, Smith, & Taylor, 1990). She would not view them as monologues or cultural artifacts but would focus instead on *how* they are told and on the meanings, identities, and ideologies that emerge in the process of telling them. The stories can be told both verbally and non-verbally, so that myths and rituals can be created within the space and time of a session. An example of using the creation of myths and rituals is "A Close Examination of Culture" session. The idea here was to introduce the content - the concept of the cultural frame of organizations - in ways that make immediate and fundamental sense to the students. Malcolm introduced the word *Ecotonos* as an analogy for the multicultural nature of a society, an environment formed by overlapping, adjoining communities. This session was a drama played by different groups of students, spatially arranged in circles. Each group had to think about and represent attitudes, beliefs, time orientation, and kinesthetic space that were characteristic of exotic communities they were representatives of: *Anthiens, Delphinians, Aquilians* . While the first represented the nurturing, peacemaking attitudes, the Delphinians resembled a modern American culture which is more individualistic. The last group lived "by examples of our Father" and related to the family ties.

Within their assigned "culture," the participants had to understand the language of artifacts (daily agendas, rituals, tasks), language of time (the one lived referring to the values of the past while the others might have been oriented into the future), and language of space (physical kinesthetic relationships). Representation of this sort, it was thought, aims to push the students to understand organizational culture beneath all the structures of the cultural environment and to present their understanding as a *metaphor* to the rest of the class in a creative way. By drawing on *the image*, which symbolized the culture, the students were to *apply* their metaphor to a concrete task that the professor passed around. The task was given in a form of a case study and was entitled The *New Plant Site*. The different "cultural communities" were to determine the best site for the new plant. Time was of the essence in the student decisions. Space was another critical dimension in relationships between the students. There was a certain spatial language within each of the cultures - gestures, distance between the speakers, etc. So part of the story here was exploring how things work in different cultural contexts, and one reason for that, presumably, was to get some perspective on how "to assess the cultural/symbolic tenor of the organizations where students work" (excerpt from the course syllabus).

By means of such a game-session, Malcolm was modeling the analysis of the organizational cultural language for the students to understand: What is going on within the "cultural community"? In the assignment sheet, she described the purpose for such a class: "This is a purposeful activity that asks you to employ the chapters of Bolman & Deal, and Morgan to articulate: What we do, How we talk (utilizing specialized language), Reveal the tangible objects, Examine the use of space and time, and Assess the levels and kinds of participation with attention to diversity and forms of leadership." This excerpt shows how the subject matter or the formal text of the theoretical course--the concept of the cultural frame of organizations as interpreted in books by Bolman & Deal and Morgan--are explored by means of applying the concepts of leadership to the student experiences as a framework for analysis. This framework has its spatial, temporal, and material dimensions, which manifest through social interactions among the students and are amplified at the interface of the individual and the social meaning making processes.

On the one hand, while moving back and forth between individual perceptions of the culture being represented and the contradictions of instructions given in the assignment cards to different groups, developing a group metaphor and confronting the opposite beliefs from "other cultures", the students developed novel meanings of *selves*. Excerpts from the student interviews reflect this finding: " [The activity] was good for me because I learned about the lack of my knowledge about myself."; "When you are going to interact with somebody, you can't put your own perceptions on that person. I felt that's what the professor was trying to get us to click on. I think a lot of that is coming from my own being a Native American, from my native environment. It's crucial to that learning... I use a lot that we did in class in my work with [residence assistants] where we have to communicate, to interact, and to listen to everybody."

On the other hand, by virtue of creation of "the space of shared boundary" (Briskin 1996), while exploring the organizational culture, the students were also developing novel meanings *between* them. In Eisenberg's (1990, 142) terms, they were not only focusing on any one individual's "compliance-gaining strategies", but rather were investigating the emerging pattern of group behavior and its influence on decision making process. All players of this drama were exposed, in a metaphorical way, to a controversial situation (e.g., a school board meeting), thus illuminating the complex issues of what it takes for teachers to take leadership to do the best for kids. This would be an example for a dilemma which may be faced by the students in their real work organizations and which is modeled by the professor in class by means of an experiential activity that involves much of the participants' imagination and metaphoric thinking.

This case selection represents, in a dynamic way, the five themes which characterized the instructional environments observed: inquiry into the phenomenon of leadership, opportunities for the experience of new roles, engaging and processing social conflict, and acting and reflecting on that action. Dominant throughout this instructional setting was the use of images to deepen understanding and meaning of these experiences (Dirkx 1998). The next case selection also demonstrates the presence of these five themes but how they are dynamically inter-related within the broader issue of naming and processing conflict. Johnston believes that this is achieved by creating instructional environments, which get learners out of their comfort zones.

Case 2: "Crossing Comfort Zones"

In his instructional approach, Dr. Johnston focuses on differences among people within organizations, and how they struggle with each other's attitudes when making decisions. He is convinced that social and personal conflict promote change in the structures of society, in organizations, and in the individual's psyche. According to Johnston, the responsibility of leadership is not to suppress conflict but to surface it, deal with it, manage it, make it productive. Within his course, an arena for experiencing ambiguity and surfacing conflict was the Bone Game, adapted by Johnston from the Indian folk tradition. The interviewed students mentioned this game as one of the strongest experiences of the course. Many limitations of the game rules (e.g., separate location of the groups; communication between the groups only through a representative; one person talking at a time) engaged learners in a series of conflicts. These conflicts revolved around communication, finding ways for collaborative decision making, and dealing with their own individual assumptions that had been roughly tested. As the interviewees recalled, some students look exasperated and some felt pushed by the rules to feel guilty for "every injustice on the earth."

The idea here involved the learner choosing these feelings and consciously, taking the focus off him or herself and how he or she feels in class, and placing the focus on the feelings of those group members who were trying to share their experiences with the learner. In other words, learners were being asked to concentrate more on identifying with the worlds of others. As one learner described his impression of the experience, "It was a very powerful experience. We were forced really to work together, and there was no way to go around it, no way to hide from that... It was long, it was tedious, I was really embarrassed some times." These observations reflect those of Scott (1991), where people "entered into the action-reaction-reflection process; they became aware of the distortion of their assumptions through the action of those assumptions and reflection through critique." The whole class was so engaged in surfacing these sociolinguistic meaning perspectives that they forgo their break. At the same time there was a lot of anxiety present in the instructional setting. "Still", the same student suggests, "I really wanted to get this experience what this was supposed to be. I was getting [at times] into frustration and, sometimes, anger...

But I felt pride of accomplishment. My anger and my frustration were worthwhile." In this situation, students were frustrated with the way messages were sent and received, and the meanings that were spoken out in different languages by learners who had different intentions, feelings and desires. These processes seem critical to a deeper understanding of transformative pedagogy.

In a different way, this case selection also reflects the dynamic interplay of the five themes discussed earlier. Both Malcom and Johnston structure the study of leadership as a form of active inquiry into one's experiences, both in the classroom and in one's own practices. They both also rely on the creation and experience of new situations and roles as a means of mediating that form of inquiry. In this case, however, Johnston uses differences among participants to surface, name, and process conflicts that are clearly evident within the learning experience. The processes used to act on and reflect among these conflicts is an attempt to mirror how one might understand and approach differences and conflict within organizations. While Malcom stressed the use of imagination and creatively construing meaning from learning experiences, Johnston emphasizes a more reflective approach. Yet, his use of indigenous practices also reveals his commitment to myths and rituals as a means of structuring and shaping the meaning of the students' experiences.

Discussion

Beyond the dynamic interplay of the five themes discussed and illustrated in the previous section, the analysis of the instructional setting investigated in this study suggests some key dimensions of a transformative pedagogy. As it is illustrated in the practices of these two instructors, transformative pedagogy involves the construction by the group of learners of a metatext. It is this metatext, rather than the formal text, which serves to mediate the transformative experiences within the setting. In engaging in an active, reflective, and imaginative inquiry of leadership, participants construct a text which itself becomes the focus of study. This metatext, resulting from or arising out of these activities, represents the common or shared meanings that the group-as-a-whole has constructed and provides further focus for both individual and collective inquiry into the meaning of the experiences being derived.

It seems clear that this metatext results from imaginative and creative engagement with both the formal text and with each other's lived experiences. Participants – teachers and learners alike – have to have some way of making sense of the material that is put forth within these contexts, some means of integrating it within their own frames of reference (Mezirow, 1991). The use of stories, myths, and rituals provides the basis for participants to engage this "content" on their own terms, yet within a "vocabulary" that is common to the group. Finally, the metatext and its imaginative construction provide the means for engaging in the difficult but necessary inner work involved in deep change (Quinn, 1996).

We can think of the content that is negotiated in the group and the meaning which is to be constructed by the students as representing what Palmer (1998) refers to as "outer work." But to confront the process of deep change, the teachers need to engage participants in a process of negotiation of this text in ways that would be most authentic to their "inner journey". This "inner journey" implies one's questioning of the current assumptions and beliefs. It resides in one's own real life contexts, and has a potential to foster significant change in ways in which one thinks and acts. Strategies to embark on such a journey can be found in the pedagogy of drama as well as in the ancient ways of performance embedded in different cultures throughout the world. This aspect was evident in the Bone Game where participants exercised new roles, often in situations of discomfort and anxiety, even conflict. The situations of social conflicts, simulated by the instructors in a certain sequence and organized around certain issues of educational leadership, fostered the students' inquiry into the self and, by virtue of this, a more intensive inquiry into the issues and controversies of leadership.

This notion of a metatext, constructed through imaginative and creative engagement with the text and each other, and mediating inner work and deep change, addresses one of the most challenging aspects of leadership in this era of rapid and pervasive change. It helps us understand how, in leadership, constructive action can occur under conditions of limited shared understandings. We have seen that such conditions are increasingly the hallmark of this era of change. Yet, the processes described here provide us with a sense of how participants may derive satisfaction and meaning, even in situations where experience does not follow the norms of communicative clarity and openness and may involve only minimally disclosive exchanges. The metatext, a product of the work of the group-as-a-whole, represents something powerful enough to allow group members to derive meaning and satisfaction from acting together. The transformative pedagogy described here to foster leadership development relied not on a strong degree of certainty, instrumental learning, and technical-rational problem solving, but rather coordinated action and the balancing of autonomy and interdependence in organizing action. Eisenberg (1990) refers to such processes as *jamming*, analogous to improvisational, coordinated actions in music and sports.

Thus, what participants are learning through this form of transformative pedagogy is that leadership involves a high degree of improvisation. It is through this act of jamming or improvising that the real work of leadership is carried out, in a way similar to how the groups observed here constructed a metatext. Like jamming, one cannot predict ahead of time what the outcome of the activity will be but, if participants enter into the process in a spirit of reflective inquiry, are open to novel experiences, and authentically and imaginatively engage the task and each other, music will result. The difficult part is that educators may not feel prepared to deal with what might be uncovered in the process of individual and collective critical reflection on psychic assumptions.

Implications for Leadership Development and the Practice of HRD

Leadership development as transformative pedagogy implies a shift in instructional emphasis from structure to process. This shift also involves a move from enforcing the learners' competence to engaging them in actions or improvised performances that would allow them to develop familiarity with the dialectics of the ongoing processes of interpersonal and within-group relationships in all kinds of communities of practice. A series of performances can become a series of mediations into the learners' study of self. These performances can help learners gain insights into difficult personal and organizational issues (the formal text) confronting leaders today (Quinn, 1996). In this view, creating learning environments assumes a change in the perspective of the training environment, from static structures to "sociosymbolic fields" (Turner, 1986, p. 21). That is, pedagogical contexts are seen as more than locations for instrumental learning and technical-rational problem solving. Rather, they represent specific contexts in which and through which participants are able to construct or reconstruct individual and collective meaning, through the presence of symbols and images which constitute this location of learning. Formal text, like the issues and controversies of educational leadership, can be introduced and negotiated through symbolic action, the genre of which would be shaped by both instructor's beliefs about the text and learners' conscious reflecting on cultural representations in which those issues and controversies of professional leadership are embedded. The symbolic messages and signals, which learners exchange inside the frame of the selected activities, designed by the teachers and improvised by the students, rely on the students' real life contexts. They serve to build a projective system, a shared meaning perspective--*a metatext*. In turn, this metatext functions as a pedagogic tool, providing data for further student reflection on and analysis of self.

It is still often the case in the field of HRD that focusing too much on bottom line results ignores the feelings and exploration of self. As Swanson and Arnold put it (1996), "a line is sometimes drawn between those who view HRD as tied to business goals and focused on the bottom line and those who would like to take a more humanistic stance" (p. 17). In this study, we described an instructional approach to leadership development that has the potential to bridge this gap. It invites participants to embark on leadership development as doing the outer work through inner work, relies on their imagination and creativity, and provides opportunity to experience the power of symbol and ritual embedded in the collective reflecting on the instructional content. This work represents an exploratory venture into the possibilities of transformative pedagogy for leadership development. We are only on the cusp of a fundamentally different way of understanding learning for organizational leadership.

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The Added Dimension: Using the Learning and Change Model as a Means for Understanding Professionals' Performance

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This study describes the change and learning process as it relates to professional practice among a selected group of 24 school principals. It identifies patterns of change and learning. The study uses a qualitative approach similar to the study of change and learning among physicians conducted by Fox, Mazmanian, and Putnam (1989). The study presented an additional factor to the investigation of professionals' learning by attempting to discern the differences in learning of designated "successful" and "unsuccessful" professionals.

Keywords: Learning, Performance, Professional Development

Improving professional practice is a major concern of all professional groups, and providing effective mechanisms for this improvement is a critical task of HRD practitioners. Improving practice is linked to educational activities and learning events. Thus, for the most professionalized occupations, such as law and medicine, as well as the quasi-professional occupations, such as education and management, it is expected that all individuals will continue to learn, and that this learning will accrue to better professional practice (Cervero, 1990; Houle, 1980; Nowlen, 1988).

Fox, Mazmanian, and Putnam (1989), in an investigation of physicians, theorized that professionals continue to learn because of changes in their lives and their practices. They proposed a theory of change and learning and an accompany model for this process that can best be described in the following statements. The model assumes that professionals have the capacity to develop a plan for learning and to develop capabilities to make needed changes in practice.

1. The change process begins with an intrinsic or extrinsic force.
2. After the professional accepts that the force for change is important, a mental image of what kind of change is necessary develops.
3. With this change in mind, the individual judges the extent to which he or she is able to make the change, whether or not the present level of knowledge and skill is adequate compared to the level of knowledge and skill needed to make the change.
4. If he or she believes his or her capabilities are sufficient, the change is made. If not, a plan for learning to develop capabilities to make the change is pursued.

They studied what, how, and why physicians change in their personal and professional lives and the role of learning in the change process. Their findings essentially reversed the usual model of training, where the learning intervention is presented, and the change in practice occurs as a result of the intervention. By focusing on the changes that occurred in the physicians' lives, they determined that the size or impact of the change (accommodation, incremental or structural)and the force (personal, professional, social) that caused the change, influenced the amount of learning that would occur. A host of similar studies, each focusing on a different professional or quasi-professional group (Confessore and Smith, 1997; Fox and Harvey, 1994; Katzman, 1996; Price, Knowles and Confessore, 1993) substantiated these findings. However, there were some unique characteristics by profession. Price (1997), for example, in his study of architects found that while the patterns of change and learning are similar to those of Fox, et al., experience and the culture of the professional also frames the changes that professionals initiate, and as a consequence, the learning that will occur.

Improving practice is a key purpose of continuing education, both formal and informal. These studies provide much rich information describing how professionals learn, and gives us some insight into the triggering events that cause learning to occur. What they fail to do is directly describe or help us understand how professionals' learning experiences can be linked to their performance as professionals. This is the central problem

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addressed by this study: Whether Fox et al.'s theory of change and learning can be used to identify distinctive learning among professionals categorized as being in "successful" or "unsuccessful".

This categorization of "successful" and "unsuccessful" acknowledges that school performance is determined by more variables than just the performance of the principal; however, substantial research evidence demonstrates that the principal is key to the success of planned change, school improvement, and effective schools (Murphy and Beck, 1993; Fullan, 1991). Principals are expected to transform schools into collegial environments where effective teaching and learning take place. In this environment, an individual principal's performance evaluation is inextricably tied to school performance. In this district, for example, principals' who's schools failed to meet standards set by the state after three years were dismissed from their positions.

Methodology

The research was designed to answer three primary questions: (1) How do principals, as professionals, learn and change; (2) How do successful and unsuccessful principals describe the change and learning process; and (3) Is it possible to discern differences between the two categorizations of principals?

Setting and Selection Criteria

The study took place in a large urban school district in the Middle-Atlantic region of the United States. The district has 122 elementary schools and 60 secondary schools. The sample was drawn from the 122 principals assigned to elementary schools. School principals were selected as the population for this study for a number of reasons. Principals, as school administrators, are expected to transform schools into collegial environments where effective teaching takes place. Fullan (1993) declared that managing school change and improvement is one of the most complex tasks of school leadership. As school reform efforts around the country continue to raise expectations for principals' performance, the demands and expectations for principals as individuals increase. While the public school system is a very unique context, the roles, duties, and expectations for its leaders are very similar to corporate organizations. The principalship is seen as a quasi-professional occupation, placing it at the lower end of the professionalization continuum, as described by Cervero (1988). The site was selected because the district had been selected to participate in a state-mandated school performance program, which utilized a comprehensive and complex process for assigning performance ratings for each school. This provided a consistent means for determining "successful" and "unsuccessful" categories. To determine these categories, the State Board devised school rating list was obtained. The list was then divided into quartiles, with the 1st quartile being designated as successful and the 4th as unsuccessful. Only those principals who had served in a school for three years or more were included in the sample, insuring that no principal was assigned to a school after the state index categorization had been established. Fifty-three of the district's 182 principals met the above criteria, with 26 falling in either the 1st or 4th quartile.

Data Collection

Interviews were conducted with 24 of the 26 participants. The interview protocol devised by Fox et al. was used for these interviews, with minor changes made to the language to reflect the professional circumstances of the principals. The Fox protocol includes 26 structured and semi-structured interview questions, and a prompt sheet. The prompt sheet provides examples of potential areas of change, and was developed by Fox et al. (1989) to provide some probing questions to help respondents remember the changes that had occurred in their lives or in their professional activities. In addition, demographic data was also gathered, including gender, age, and length of service with the district. All interviews were audio taped and transcribed. Interviews lasted approximately 1 to 1 ½ hours.

Findings

Principals' change and learning

Principals reported all three types of changes: accommodations, incremental, and structural. Accommodations are small, simple acts of adjustment in practice, where very little learning occurs. The principals reported the fewest number of changes in this category. Examples of this type of change include checking the fax machine more often to respond to the central office more immediately than before, or learning how to complete new reports. Incremental changes, requiring adapting to more complex situations or new information, accounted for the most changes with these principals and included examples such as sharpening mentoring skills to improve quality of work with new teachers and developing strategies to decrease the number of hours spent working on school assignments at home. Finally, the principals also reported structural changes, or very large, complex changes. These changes often involved major life events and led to the most in-depth learning experiences. Examples of these types of change include the decision to retire or to implement a complex professional development system for the faculty of the school.

The data were also analyzed in terms of the forces for change that the principals reported. Personal-professional forces most often precipitated the accommodations. These are situations where the impetus for change was largely for personal reasons, but was also related to the principals' work. For example, a principal reported the need to be better organized in her personal life in order to be able to respond to the many inquiries and requests for information that she confronts daily. Incremental changes were most often associated with professional forces for change; situations where the principal made a decision to change practice in order to improve professional practice. An example of this type of force and the resulting practice change occurred when a principal stated, "I have participated in activities designed to sharpened my mentoring skills to improve the quality of my work with new teachers." Finally, structural changes were most often associated with personal forces, such as when a principal described fundamentally altering the way that she did her job to incorporate new ways of thinking that she learned in formal courses.

When analyzing the types of activities the principals reported and the considerations they made when determining the learning activities they would choose, four factors emerged: (1) the principals' perception of the complexity of their professional environments, (2) the structure of the school system, (3) how much time they felt they had to learn, and (4) the principal's own assessment of current knowledge level and learning needs. The principals reported being very limited in the amount of control they believe they have over their own essential practice decisions. One can speculate that this lack of professional control may be a strong influencing factor in their self-perceived capacity to engage in their own learning.

When talking about the changes that they undertook, the principals did not report having a clear image of the desired change. Principals described their work environments as ones where they had limited control over their work tasks and even less ability to determine the priorities for their schools. Thus, their descriptions of change and learning were very reactive—there was limited planned response to the changes, and apparently no opportunities to consider their own learning "gaps."

Differences between successful and unsuccessful principals

In analyzing the data by category of principal, no differences were found when a simple count of the numbers or types of changes was made. Similarly, in analyzing the transcripts, there did not appear to be any substantive differences between the groups when they described forces of change that precipitated the learning. It was possible, however, to discern differences in (1) the amount of learning the principals reported as a result of the change; (2) the way that successful and unsuccessful principals described how they organized and planned their learning activities and (3) the way they attributed the need for the incremental type changes.

Unsuccessful principals reported making changes without any learning occurring while the successful principals reported that they learned from the changes. They also reported a greater use of deliberative learning methods, defined here as those that emphasize thought over action, to make changes regardless of the type of change that occurred.

In describing their incremental changes, successful principals talked more frequently about making these changes for internally driven reasons, such as the desire to be more efficient, while unsuccessful principals, in describing their incremental changes, attributed them more to the effects of the external forces inherent in the job, such as being "forced" to introduce new faculty development programs.

Although none of the principals appeared to be especially proactive in their pursuit of their learning opportunities within the context of specific practice situations, the successful principals more often reported seeking out opportunities for generic learning, meaning that they engaged in activities such as taking courses at the local colleges, or enrolling in doctoral studies so that they could improve their practice and become more effective principals.

Conclusions and Recommendations

The purpose of this study was to determine if it was possible to discern differences between the change and learning behaviors of quasi-professionals who had been categorized as successful or unsuccessful. The Fox et al. (1989) theory of change and learning did prove to be an effective means to distinguish the motivations and type of learning activities of successful and unsuccessful professionals, the model did not adequately account for situations where professionals believe they have limited control over the conditions of their work, where they lack respect from their constituents, and where the time of professional training is short and the knowledge base is neither complex nor specialized.

The patterns of change and learning the principals are similar to those discovered in the study of physicians; however, important differences were found. Most notable was the lack of new learning associated with the changes made by the principals. This lack is attributed to the principals' perceptions of lack of control. Unlike physicians, the principals believe they have very little control over their work environments and conditions for delivery of services. In contrast, the physicians in the Fox et al. study were very autonomous in their practices. Although managed care is changing this sense of autonomy, physicians' work is still focused on meeting the needs of individual clients while principals are generally responsible for multiple constituencies many of whom are outside of their immediate control.

Similar findings were also obtained in related studies of architects, teachers, and real estate professionals. Their change and learning behaviors were consistent with the original physicians' study. However, as with the physicians, these professionals report a high degree of autonomy and personal control over their professional practice, and the issue of "reactive learning" does not seem to occur. Thus it appears that this belief of lack of professional control may be a strong influencing factor in the capacity of principals to effectively learn from the changes presented in their practices. Smith's (1997) study of change and learning of real estate agents is particularly instructive, because Smith used a population of individuals who can be categorized as less professionalized than principals. She found great similarities in the learning behaviors of these individuals and those in the most professionalized occupational groups. Again, these individuals had very great autonomy in the conditions of their professional practice—perhaps the most control of all of the professions who have been studied.

Another factor that may account for this difference is the lack of extended professional preparation, and general lack of respect of society for the principals. Smith (1997) found that the real estate agents were distinctive in that they sought opportunities to learn "how to be a real estate professional." She speculated that this need was driven by the fact that real estate professionals are poorly trained, and are not particularly respected by society. Principals are similar in both of these regards. The knowledge base needed to perform effectively as a principal is not sufficiently distinctive to be perceived by the public as complex and specialized. Because principals lack the extended training of traditional professionals, including "a set of values, preferences, and norms which they use to make sense of practice situations, formulate goals, and directions for action and to determine what constitutes acceptable professional conduct" (Schon, 1988, p. 33) they may feel more pressure to respond to all demands of the varied constituencies who believe they have a right to direct the activities of the principal. At the very least, they are poorly prepared to undertake the role of principal, particularly at a time when schools, and their personnel are under attack as failed organizations, subject to extensive pressures and demands of a society who spends large amounts of tax money to support them. Thus, this "reacting" behavior may be the only way that principals can even begin to meet these professional demands.

Intriguingly, the finding that the only real difference between the successful and unsuccessful principals was the greater amount of generic learning reported by the successful principals supports this assertion that perceived lack of control is a key issue for change and learning of the quasi-professional group. It was clear that the successful principals were aware that they had limited opportunities to control and influence their work environments. They believed that theoretical knowledge would help them to get the job better under control. Thus, these learning opportunities were a way to find some control, even help them become more pro-active in their practice.

Implications for HRD Practice

The circumstances of practice encountered by corporate managers are similar to those of school principals. Management can be categorized as a quasi-profession, whose members are faced with many demands and little control over their work situations. Similar to principals, managers lack a coherent knowledge base and generally are not highly respected by the larger society. The findings from this study provide an intriguing perspective to address the lack of learning by managers. These findings suggest that learning is inhibited by the speed of the changes and the complexity of the environments. This is a particularly important, because the workplace of the new century is increasingly complex and the rate of acceleration of change is undeniable.

It appears that the Fox et al. framework for studying professionals' learning provides HRD professionals with a means to investigate the specific learning needs of their managers. The finding that successful quasi-professionals utilize generic learning activities to help achieve some sense of control and mastery over their professional practices provides one way to begin to develop learning programs for mangers. Once the HRD professional understands the forces for change and then learning, they will be able to devise mechanisms and strategies to help managers understand their learning needs.

Learning as a key to improving professional practice is a fundamental premise of HRD. By linking performance to the change and learning model, a critical dimension to understanding how to best help professionals is added, helping to improve the practice of professional managers.

Recommendations for Further Research

This study provides the most basic first steps to understanding differences among professionals' learning needs and proclivities. Further research is needed to expand this initial work. Specifically, we recommend:

1. That this study should be replicated with other quasi-professional groups. In addition, the designation of "successful" and "unsuccessful" professionals was done using a mechanical and somewhat artificial mechanism. A future study, using other assessment tools, would provide an alternative means to define effective practice.
2. While the change and learning model held in terms of forces for change and types of change, the idea of public perception of profession as an influencing learning factor is intriguing, but highly speculative. Other studies focusing in this area would provide important additional understanding of professional's learning.
3. Finally, better understanding of how to improve the practice of school principals is an important national priority. The Fox et al. model appears to have efficacy as a mechanism for understanding how school principals learn. More work needs to be done with larger and more diverse populations.

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A Methodology for Narrative Inquiry: Examining the Role of Narrative in Framing for Action

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Narrative inquiry is a research methodology that beckons a researcher as interpreter, artist, and composer (Price, 1999). This paper builds a case for using narrative inquiry to examine the role of narrative in framing for action in an organizational context. It presents (1) a conceptual framework for interpreting the methodology and (2) an innovative research model. The methodology has evolved narratively as the researcher has used it to examine the contribution of narrative processes to learning how to change. She expects to complete this doctoral study in the spring and encourages others to adapt its methodology in other organizational settings.

Keywords: Narrative Inquiry, Learning from Experience, Organizational Learning

We all know from daily living that sometimes we learn from our own experience and from the experience of others. In our professional practices we frequently recount what has happened, describe what we have been engaged in doing, and tell others what we hope to do and how we plan to do it. Very often, however, we find it challenging to explain how things actually happened, even when we have achieved desired results. Connecting past, present, and future events narratively is one way of making the meaning of what has happened more accessible. When we engage in this kind of dialogical exchange, sometimes we tell stories. Stories trigger new insight that differs from learning that emerges from analysis. These different thought processes that lead us to adopt beliefs fall into at least two categories, first differentiated by Bruner (1986) as analytical and narrative.

Analytical and narrative processes each assume an epistemology of the nature and grounds of knowledge. Analytical processes are linear patterns of thought that follow rules of logical argument. The purpose of argument is to convince us of truth. Using analytical processes helps us understand *what* is happening. One familiar pattern of analysis is to separate a subject of analysis into its logical components to gain better understanding of the whole. The notion of modern scientific progress has been built on such deductive processes.

Narrative processes, on the other hand, rely upon inductive reasoning that acknowledges and values contextual elements. Narrative thinking encompasses hermeneutic processes in which story emerges as a means for interpreting relationships and action. Integration is a dominant narrative pattern that we use to create and share informative narratives that interpret reality. The purpose of story, as differentiated from argument, is to convince us of lifelikeness or verisimilitude, rather than truth. In my research I have found that examining narrative processes contributes to understanding *how* things actually happen in an organizational setting.

My desire to research part of this complexity led me to design the proposed methodology. Because narrative processes frequently are more intuitive than intentional, most people use them with limited self-awareness. Narrative inquiry lends itself to studying such tacit knowledge (Polyani, 1966). The act of narration seems particularly relevant to study personal practice knowledge of educators, since that knowledge often remains unarticulated (Schon, 1987). We educators frequently "know more than we can tell" (Polyani, 1966, 6). This kind of knowing includes both theoretical and practical knowledge, both the *what* and the *how* of our practice. In this case nine participants, members of an established leadership team and learning group, engage in activities that respond to the question, "How can higher education learn how to change?" (Eckel, Hill, and Green, 1998).

The research literature, however, includes fewer systematic models than I had expected (Josselson and Lieblich, 1999) for studying tacit knowledge, particularly given the pervasiveness of story (product) and narrative (process) in organizational contexts (Boje, 1994; Czarniawska, 1997). This gap in the literature led me to develop a conceptual framework to lend credence to the proposed research model. It combines both analytical and narrative thinking, supports a constructivist interpretation of experience, and leads to findings presented as story. The methodology has enabled me and my co-researchers, the participants, to understand more clearly how narrative processes have contributed to their learning how to frame for action. Just as importantly, it has contributed to reducing the volume of collected data. The latter contribution is significant, for it is the task of a writer of qualitative

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research "not to gather as much data as possible but rather to get rid of as much as possible, to 'winnow' the irrelevant from the essence" (Wolcott in Price, 1999, 17).

This paper (1) interprets the conceptual framework from which my approach to narrative inquiry derives; (2) poses the research question addressed by the paper; (3) describes the research model and its narrative evolution; (4) presents results and findings related to using the methodology; (5) draws conclusions and recommendations for further application of the methodology, and (6) acknowledges potential contributions to HRD.

Conceptual Framework

In preparation to conduct this narrative inquiry, I first reexamined the tenets of modernity and post-modernity and their implications related to learning from experience. Postmodernity is "culture that is self-consciously and sympathetically informed by an understanding of (1) the interpretative nature of human perception; (2) the indeterminate, contextualized, and fragmented nature of knowing and being; and (3) the dedifferentiated and generalized nature of contemporary communication" (Bagnall, 1999, 5). Postmodern theory provides a particular lens for viewing the learning of individuals, groups, and organizations. It underpins my interpretation of the story of how we construct meaning in a postmodern world, how we value our experience and the experience of others, how we use language to interpret experience and to construct meaning, and how the nature of research has changed. I decided to tell you about this four-part conceptual framework before presenting my research design because my interpretation of these issues explains the research design.

How We Construct Meaning in a Postmodern World

Knowing and learning are two means available to us to construct meaning in a postmodern world. If belief and knowledge are provisional and partial at any time, and if they are determined interpretatively by a learner, then the value of trying to answer a fundamental question becomes apparent. How can researchers as learners approach knowing and learning so as to empower themselves to develop a capacity to learn in more meaningful ways? Because "it is difficult to have faith in the traditional stories" (Czikszentmihalyi, 1993, xv), a researcher must believe that identifiable processes for making meaning do exist, and must also develop and trust a personal capacity to learn how to change.

Making these two foundational assumptions motivated me to develop a narrative methodology that contributes to understanding how to construct meaning from fragments of personal experience and from the experience of others. If you and I, for example, were to experience the same event, and we both were motivated to act on the basis of our shared experience, each of us would construct coexistent, but different, meanings of our experience, each informed by the singularity and similarity of the other. Our interpretations would reflect different past experience, different frames of perception, and different ways of interpreting our shared experience. Furthermore, each of us probably would choose to act differently in one way or another on the basis of that experience. Each interpretation would be true within the inter-subjective, linguistically mediated frameworks of our beliefs (Bagnall, 1999).

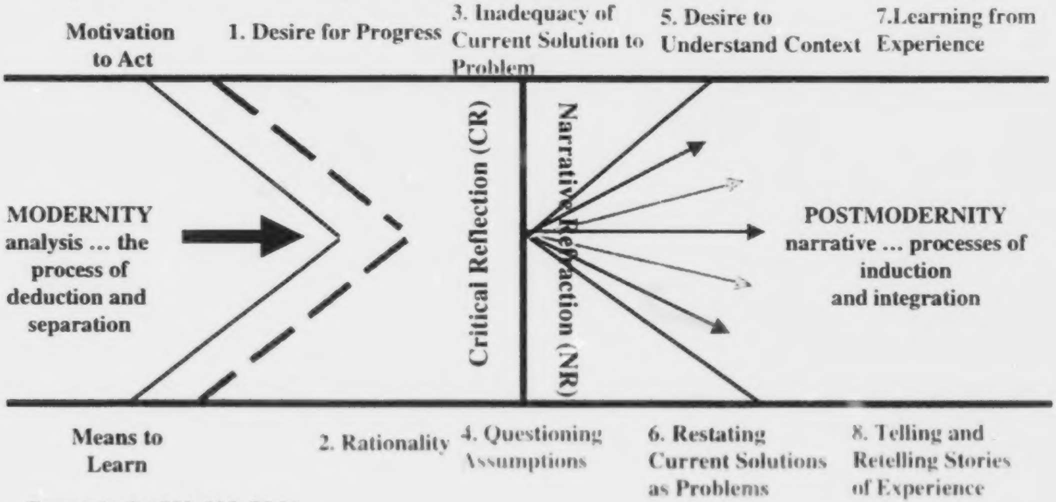
Working with teams of educators in my resource development practice, I have learned that making meaning of experience requires viewing the world through two different lenses and then interpreting and merging the related images into a perceptual collage. This process reflects selected aspects of a flow of thought from modernity to postmodernity. Movement in the figure that follows this discussion reads from left to right through past, present, and future time, from analytical thinking and problem solving, to narrative thinking and storytelling. As we move along this spectrum from deductive to inductive modes of reasoning, our motivation to act changes. As our motivation to act changes, we tend to select different means for learning. Multiple interpretations of what is happening become more plausible than a single representation, a consequent recognition that derives in part from using different means to learn, or from accepting or not recognizing deterrents to learning.

The ebb and flow of movement from analytical to narrative does not privilege one form of thinking over the other. It suggests an ecology of learning (Bateson, 1980) that balances analytical thinking, more suited to problem solving, with narrative thinking, better suited to building relationships. Using the two modes of thought affords a researcher a more holistic, ecologically sound means for interpreting the meaning of experience.

Although I have drawn ***Figure 1. A flow of thought from modernity to postmodernity: a spectrum from analytical to narrative*** as two dimensional and directional in its representation of learning in a narrative field, I want to emphasize that the analytical and narrative processes described are recursive and non-linear. They represent four possible cycles of action, reflection/refraction, and learning: 1+CR+2, 3+CR+4, 5+NR+6, and 7+NR+8. Action is an integral part of both life experience and narrative. Reflection is an analytical process, and refraction, a narrative process, that both contribute to learning. "All significant experiential learning is a change in a learner – a change in behavior, in interpretation, in autonomy, in creativity, or in any combination of the types of change" (Cell, 1984, 28). The significance of individual changes in an organizational context relates to how the changes might prompt action with potential to impact advancement toward achieving a mission and related goals.

Within this narrative interpretation, cycles of action, reflection/refraction, and learning occur. The cycles prompt (1) questioning; (2) renewed enactment; (3) narration of experience as a form of reflection in relationship to the experience of others, connecting that experience to the self and to fragments of a narrative whole; and (4) patterned initiation of linguistic communication cycles of storytelling and retelling. When we tell others what has happened, and we listen to their responses and to our own voice, we are using narrative processes as a way of reflecting upon experience. Very often past experience informs the present in a way that empowers us to learn better ways of mapping what to do in the future. In this way narrative helps us frame for action.

Figure 1. The flow of thought from modernity to postmodernity: a spectrum from analytical to narrative


Motivation to Act
1. Desire for Progress
3. Inadequacy of Current Solution to Problem
5. Desire to Understand Context
7.Learning from Experience
MODERNITY analysis ... the process of deduction and separation
Critical Reflection (CR)
Narrative Refraction (NR)
POSTMODERNITY narrative ... processes of induction and integration
Means to Learn
2. Rationality
4. Questioning Assumptions
6. Restating Current Solutions as Problems
8. Telling and Retelling Stories of Experience

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How We Value Our Experience and the Experience of Others

Experience is the raw material from which we construct meaning; it is an unpredictable text in a continuous state of flux. Our experience influences our interpretation of and interaction with the world in ways that contribute to learning (Cell, 1984; Schon, 1987). Once narrated, experience becomes a text that embodies potential for multiple interpretations of its content and context. Stories are "a way of exploring possible worlds out of the context of immediate need" (Bruner, 1986, 123).

Interpreting experience as both potential content and context for learning implies a particular view of learning in organizations in which action, reflection upon the experience of acting, and learning from experience have become recognized as a pre-eminent organizational learning strategy (Watkins and Marsick, 1993). This view implies an intrinsically narrative nature of organizations. Our need to understand the relationships among individuals engaged in learning is implicit in Senge's (1990) challenge that a team or group, rather than an individual, has become the learning unit of an organization (Kasl, Marsick, and Dechant, 1997).

As human development theorists have pointed out, individuals embody a capacity to change from *within* to the extent that they are able to access experience (Kegan, 1994). When experience is pooled in a group, the likelihood increases that change will happen. Accessing experience requires taking action, reflecting upon that action, assessing its potential implications, and learning from it by imagining other possibilities. Organizational experience shapes and is shaped by individuals as learners and as group participants whose frameworks of belief and values becomes more clear as they work, narrate experience, and learn together.

Narrative captures experience in any environmental context. Boje (1994) and Czarniawska (1997) suggest that narrative processes play an important role in organizations. They imply what Revelas and Razik (1998) write, that not all organizations can be understood fully by using only a diagnostic view since contradictory elements continually enter any system. Within any organization, "the major mode of communication, in purely statistical terms, is in fact narrative" (Cznarniawska, 1997, 21). What organizational narratives do is to capture the nomadic quality of *becoming* as opposed to *being*. "The function of the story is to find an intentional state that mitigates or at least makes comprehensible a deviation from a canonical cultural pattern" (Bruner, 1990, 49-50). If this assertion is correct, then organizational stories chronicle cultural shifts, and organizational storytellers create new ways of acting. "It is the storytellers who construct the categories-in-use, the frames-in-use, the histories-in-use, and the capitalism-in-use in their discipline and governance of organizational learning" (Boje, 1994, 434-435).

How We Use Language to Interpret Experience and to Construct Meaning

How we use language as a learning tool reflects how we view the world. How we interpret experience to make meaning of what happens constitutes learning from experience (Cell, 1984). First experiencing, and then interpreting what happens, enables us to understand our reality. Theorists in disciplines as diverse as adult learning, communication, narrative, and psychology emphasize the centrality of language to learning and meaning making. Some theorists interpret learning as a collaborative process that occurs in dialogue (Senge, 1990).

A constructivist epistemology espouses using language to acquire knowledge about the world. It assumes a difference between *representation* of reality and *construction* of reality through interpretative processes that focus upon experience. Two different ways of using language are representational and interpretative (Bagnall, 1999). Representational language attempts to re-present reality in a way that represents the truth. A modernist sensibility espouses using language in a representational way to mirror reality. This kind of thinking tends to be convergent, analytical, and deductive. It is well suited to solving problems, leading to what are perceived as correct solutions. On the other hand, a postmodernist uses language interpretatively (*Ibid.*). Interpretative language acknowledges that there is no single reality to re-present and constructs story. An interpretation itself becomes a reality within a framework of beliefs and values that emanate from a narrator's life experience in linguistically mediated contexts

Narrative provides a means for conceptualizing, structuring, and presenting interpretations of individual, group, and organizational experience (Czarniawska, 1997). Using linguistic processes in narrative ways holds potential to contribute to learning (Bruner, 1986; Polkinghorne, 1988). However, "In contrast to our vast knowledge of how science and logical reasoning proceed, we know precious little in any formal sense about how to make good stories" (Bruner, 1986, 14). Contributing to this lack of understanding about narrative processes may be the complexity that story must construct simultaneously a "landscape of action" via a "story grammar" and a "landscape of consciousness," what the actors "know, think or feel, or do not know, think or feel" (*Ibid.*).

Organizational narrative processes, including storytelling and re-telling, move from the particularities of one concurrent story to the next. They interpret meaning through themes, patterns, and referents that occur. The constructivist intellectual tradition "argues that experience doesn't happen to us; we make experience. Events happen to us, but we make experience by interpreting events" (Brookfield, 1995, 182). A constructivist assumes that an individual and a group learn how to learn by experiencing recursive cycles of enactment, followed by critical interpretation of what happened, taking action again, and reinterpreting it for its meaning on another level.

How the Nature of Research Has Changed

A view of the nature of research as dialogical and collaborative flows naturally from the preceding interpretations of knowing and learning, experience, and language use (Mishler, 1986, 1990). In this conceptual framework, a researcher is no longer the knower or the voice of authority. A researcher and participants become co-researchers and co-learners. A primary human attribute, narrative knowing is a methodology for the human sciences (Polkinghorne, 1988). Through narrative inquiry, perspectives of a narrator become more meaningful, knowable, and able to be made explicit (Cresswell, 1994).

Narrative inquiry appears to be one of the "new tools for inquiry" (Revelas and Razik, 1998, 135-136), a reflective strategy to promote learning and change from *within*, both within an *individual* and within an *organization*. In using it I have interpreted narration and interview as discourse (Senge, 1990).

Research Question
Can the application of this research model to conduct a narrative inquiry advance our understanding of how an organization learns to change and how narrative processes contribute to that process?

Research Design and Methodology

Narrative is both the research methodology and the subject of this study. My choice of narrative inquiry to interpret the meaning of stories of experience of nine participants engaged in learning how to change seems appropriate for several reasons. First of all, I am interested in examining not only the *what*, but also the *how* of what has happened. Variables cannot be identified easily, and the topic requires examination and exploration in a natural setting. Narratives, the centerpiece of this examination of narrative processes, "are a valuable transformative tool. They allow us to communicate new ideas to others, and to discover new meanings by assimilating experiences into narrative schema" (Gudmundsdottir, 1995, 34).

Narrative inquiry aids us in understanding the "storied" nature of life experience. It is a natural, human approach, for humans exhibit "protolinguistic" readiness to organize experience narratively (Bruner, 1990, 67). Narrative inquiry offers a compatible way to study narrative processes (Reason and Hawkins, 1988). I have used the methodology to study how narrative thinking has contributed to learning how to change for professionals committed to learning from their experience in higher education. Public consensual acknowledgment, achieved through extended dialogue about how uncontrollable, changing contextual variables have rendered some traditional practices and beliefs inadequate, has contributed to their desire and capacity to learn from experience.

In designing this methodology, I aligned the research method with the research purpose to access the meaning and implications of the participants' experience. I wanted to focus on both the singularity and similarity of their experience of learning how to change by using a holistic, collaborative approach.

Preparing for Collaborative Research

Although I am a knower in my own professional setting, as co-researcher and co-learner with study participants in an unfamiliar setting, I relinquished that status. I wanted to listen to *their* voices and to focus on how *they* used language to create meaning. From my practice I understood the need for collaboration and the extent to which both context and the experience of others inform collaborative learning. I laid groundwork for interviewing during several visits to the field. During the visits I met with the learning group to observe their interaction, to discuss mutual research interests, and to tour the campuses. This fieldwork contributed to developing trust with study participants, who then felt more comfortable to speak willingly and honestly in interviews. My field experience also contextualized the methodology before I used it in the research setting.

Drawing Upon Several Research Traditions and Data Collection Techniques

Combining several traditions of inquiry -- case study, ethnography, phenomenography, and phenomenology, -- strengthens this study. To study a unique, revelatory case with organizational boundaries requires in-depth description and holistic interpretation that derives from narrative inquiry. The methodology uses ethnographic techniques and multiple sources of information within the field of the case (Cresswell, 1998). It encompasses inductive reasoning, heuristic possibilities for generating new understanding, "thick" description encompassing vast amounts of data, and the particularistic nature of each participant (Merriam, 1988). The study is phenomenographic in that it describes the meaning of the lived experiences of nine individuals engaged in the phenomenon of learning how to change (Marton and Booth, 1997). It relies upon phenomenological practices with participants reading and responding to stories to ensure they are trustworthy interpretations of their experience.

This methodology employs four data collection techniques: interview, observation, document analysis, and journaling. Interview is the heart of the research design. I have conducted three two-hour interviews with each of nine participants. I have used data from observation, document analysis, and journaling to augment the voices of the participants, who have told me almost two hundred stories that lay embedded in their interview texts.

Piloting the Interview Protocol

When I piloted the interview protocol, I was uncertain and hesitant to risk asking only one question during the first of three two-hour interviews. My approach was to lead a participant through a process of deconstruction, to move away from institutional culture and language toward a personal perspective. In my first two pilots, I encouraged each participant to interpret experience using her own voice. When we reached a point of apparent readiness, I said, "Tell me the story of your experience of learning how to change." I had prepared a series of prompts to encourage story flow. What I learned from these pilots was that when a researcher asks a participant about something that is meaningful, a story of that experience tells itself with minimal prompting if the researcher does not interrupt the natural flow of a participant's narrative thinking.

Since I had considered my research role to be that of an active learner and co-researcher with the participants, and because I wanted to understand change from *within*, I conducted a third pilot of the methodology by simulating the process with myself. This simulation gave me better understanding of what a participant might experience during narrative inquiry. The self-pilot offered me a means for becoming more self-aware of the meaning of participating in narrative inquiry. It gave me better understanding of the implications of the process in which I had planned to engage others. It helped me internalize the extent to which narrative research prompts learning in a way that I had not experienced before. I learned the extent to which this kind of linguistic exchange reaches into subconscious memory, connecting elements of experience in new and meaningful ways through telling and retelling, through interpretation of that text, and through increased self-awareness of one's own learning processes, the narrative processes inherent in the methodology.

In this way the methodology itself began to emerge as a narrative. My learning from the first two pilots informed my self-pilot; my learning from the self-pilot informed my first set of interviews; and each subsequent set of interviews continued to inform the next. Throughout the process, even though it has been collaborative, I have had to acknowledge my privileged position as the one person who has had access to all of the data.

Learning How to Present Data as Story

Collecting a body of concurrent stories from participants in an organization yields a panorama of interpretations of what is happening. Such a collection offers a potential critique of the dominant discourse or public narrative advanced and espoused by the organization (Brooks 1998). A challenge to the methodological design was how to lift stories of everyday events from interview texts, sculpting them to amplify participants' voices so that the stories resonate with their memories. When storied interpretations of individual experience ring true, they juxtapose varied perceptions of events that are trustworthy for a local culture. They attest to what each teller "believes in" rather than what each "believes that" (Ricoeur, 1981, 21). Reciprocal modification of the *self* by the *other*, and vice versa, contributes to increasing self-awareness and learning; to challenging previous conceptions; to risking confusion and disruption; and to increasing the possibility for change (Schaafsma, 1993, xi)

In addition to acknowledging multiple interpretations of a text, narrative inquiry also "pays attention to the forms in which knowledge is cast and the effects that these have on an audience" (Czarniawska, 1998, 6). Different genres produce different effects. Stories told within organizational cultures are "mental models" (Senge, 1990), or guides for action. Stories of experience become seeds from which new theories and practices can grow, for narrative draws upon memory, connecting conscious and subconscious, as well as past, present and future time.

Summarizing the Research Model and Process

The following two tables provide a template of this narrative research model:

Table 1. Narrative Analysis

Analytic Sequence	Focus of Analysis	Process and Output
A. Narrative Analysis	What are the stories being told?	Tell the stories of the participants, using first person voice, lifting them from the interview text, and using text to title each. Write them as a form of creative non-fiction, using quotation marks and traditional narrative format. Give individual repertories of stories to participants to read for trustworthiness and verisimilitude and to determine the extent to which they hear their own voices. Revise collaboratively as appropriate.

B. Interpretative Analysis	What is the meaning of the stories in the form of emergent themes?	Identify the themes of each story paying attention to those elements of the story related to learning, narrative, and change. Summarize data on worksheets.
	What is the meaning of the themes in the form of emergent patterns?	Theme the themes to identify patterns, paying attention, for example, to what repeats itself, the nature of the patterns, how to describe related differences, what circumstances prompt the patterns, and what the repetitions mean. Group stories according to emergent patterns for presentation. Summarize data on worksheets.
	What are the referents that occur?	Identify key words that are not themes, but are meaningful to participants. Use data from observations, document analysis, and journaling to clarify the meaning of such referents and to augment the interview stories with observation, document analysis and journaling for clarity for first time readers being introduced to the study.
C. Interrogative Analysis	1. How do professionals, working individually and as group participants in a contemporary organizational context, use narrative processes as part of their effort to learn how to change?	Determine the extent to which the complete repertory of stories that contextualize each other contributes to answering the research questions of the study. Summarize on worksheets to use in writing the findings of the study.
	2. What kinds of narrative processes do they use?	
	3. What conditions influence their use of narrative processes?	
	4. How and to what extent do they perceive that narrative processes contribute to their learning?	
	5. How and to what extent do they perceive that narrative processes contribute to their capacity to change?	
	6. What kinds of individual, group, and organizational change do narrative processes influence?	
	7. Are there other findings unaccounted for by these questions?	

As I have written and analyzed the stories, I have tacked back and forth between narrative and theoretical analyses, asking myself, "Does this story confirm, contradict, or augment what theorists have said?" Because this study focuses on how framing for action happens, in my literature review I interpreted selected content from each body of theory as a series of action statements. The following table summarizes key concepts of narrative theory and experiential learning theory that I have compared with the emergent, concurrent narratives. Once I have completed this comparison, I will revise my preliminary findings and conceptual framework as appropriate.

Table 2. Theoretical Data Analysis

Body of Theory	Theoretical Concept	Interpretation of Data
A. Narrative	Narrative structures thought and experience to create reality.	Identify textual passages and stories that confirm, contradict, and/or augment the theory. Summarize on worksheets to use in writing the findings of the study.
	Narrative interprets life experience as action.	
	Narrative contributes to the construction of both individual and communal identity.	
	Narrative provides a way to reflect upon experience.	
	Narrative creates meaning and generates knowledge from experience.	

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B. Experiential Learning	Experience functions as a moving force that is a starting point for learning and for changing behavior.	Identify textual passages and stories that confirm, contradict, and/or augment the theory. Summarize on worksheets to use in writing the findings of the study.
	Reflecting critically upon experience to discover its meaning provides us with a way to learn from experience by reinterpreting past experience.	
	Dialogue creates space to reflect critically upon experience with others and to examine processes of analysis and interpretation.	
	Socio-cultural context informs both dialogue and learning.	
	Learning that is meaningful frequently leads to change in behavior, in interpretation, in autonomy, in creativity, or in a combination of these changes.	

Implicit in building this research model for narrative inquiry is a logic that has required me to dance back and forth between analytical and narrative thinking. This dance also characterizes the process of analysis and synthesis that I have described. The model respects both the singularity and similarity of the experience of each participant in learning how to change. It also attempts to encourage their use of both analytical and narrative thinking during our inquiry. The text of the interviews drives the first part, writing the stories. Then the stories drive the analytic process. Finally the theory provides a counterpoint to assess what we have learned.

Results and Findings

Preliminary findings suggest that this research model advances our understanding of how an organization learns to change and how narrative processes contribute to such learning. By applying this systematic narrative methodology, my analysis of the study seems to be unfolding in much the same narrative way that the participants' stories have emerged. It is possible that I have experienced how pre-existing narrative schema pattern our thoughts to a greater extent than we realize (Bruner, 1986). I have found it beneficial to respect an inherent narrative structure of what has happened, both in the research setting and while using this methodology. One analytical key to unlocking the meaning of the data is to continually interpret narrative flow as it happens, moving from one story to another in much the same way as a painter changes colors on a brush. The stories are there, waiting to be lifted from the interview text; the art is to foster their emergence. It requires a light touch and a tough mindedness of multi-tasking that I had not anticipated. Having this template to follow, however, has made my task not only doable, but also enjoyable since the emergent narratives hold surprises and learning. I have experienced for the first time the "promise of narrative research" (Brooks, 1998) and creative potential of case study.

Contribution to New Knowledge in HRD

We will achieve the promise of narrative research (Brooks, 1998) only *when* we use various approaches to narrative inquiry in other singular contexts that share some similarities with the research setting of this study, and *if* we continue retelling our stories about what happens during the process of narrative inquiry. Therefore, I have presented this research methodology *not* to imply that: (1) it is the only way to examine narrative processes, (2) this model is a finished product that achieves an ideal without limitations, or (3) other existing studies have not been based on sound research models and techniques. This model is a time intensive narrative work in progress, a work being informed both by my learning from the experience of using it and by my academic training in American and English literature. It is but one approach among others chronicled by Price (1999).

I have written this paper as a call to contribute to new knowledge in HRD by using narrative inquiry more frequently in organizational settings. I have emphasized (1) the extent to which the singularity of any narrative inquiry requires a researcher to approach a study creatively (a) by adapting existing research models and strategies and (b) by developing new ones as the narrative process of research unfolds; (2) the significance of interpreting narrative processes and their implications for learning how to change in an organizational context; and (3) the application of what appears to be a new model for conducting narrative inquiry.

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Strategies for Facilitating Interaction When Using Technology-Mediated Training Methods

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Technology-mediated training methods are becoming more prevalent in scope and usage. These methods cause a difference in the ways that trainees interact. Trainers often have the role of facilitating the interaction between trainees and thus must develop new skills to accommodate the different communication styles associated with technology-mediated methods. This paper focuses on some of the differences between face-to-face delivery and technology-mediated delivery and will provide strategies for facilitating interaction when using technology-mediated training methods.

Keywords: Technology-mediated Communication, Training, Facilitation

As educators and trainers who incorporate technology-mediated interaction into our curriculums, we have noticed that technology influences the way learners interact. Trainers often have the role of facilitating the interaction between trainees and thus must develop new skills to accommodate the different communication styles associated with technology-mediated methods. This paper will focus on some of the differences between face-to-face delivery and technology-mediated delivery methods. In addition to providing evidence of the differences resulting from quantitative data and experiences, we will suggest eight strategies that trainers can incorporate into their methodology to accommodate trainee interaction within technology-mediated training methods.

Technology-mediated Training

Technology-mediated communication has gained significance in education and workplace training. Many students are receiving undergraduate and graduate degrees through interaction with instructors and peers using Internet and CDROM technology. Trainers have also incorporated the technology and have used it to deliver many different types of programs to their organizations and clients. The importance and significance of the method is growing (Hiltz, 1986; Sproull & Kiesler, 1991). The use of technology and training can provide a unique set of challenges that can have a profound affect on the training and learning process (Murphy, Drabier, Epps, 1997). The trainer's role changes when incorporating computer mediated communication into the course (Gunawardena, 1992). The challenges we want to address are related to the fact that students interact differently when using technology-mediated training methods instead of traditional face-to-face training methods.

There have been a number of differences and similarities identified in the research pertaining to the comparison of face-to-face training and technology-mediated training. Communication effectiveness is similar when comparing the two methods, but face-to-face participants report a higher level of satisfaction with the interaction experience (Warkentin, Sayee, Hightower, 1997). Sexual exclusionary behavior has not been found to be greater, but female influence and contribution has been found to be lesser in technology-mediated methods (Ross, 1998). Technology-mediated methods have caused instructor-student interactions to be more informal and student-student dynamics have been found to be more awkward (Treadwell et.al, 1998). One of the most significant differences between the methods is the feeling that participants have of anonymity. In many cases, the participant's personal and professional characteristics are masked which plays a very large role in face-to-face interaction (Treadwell, et.al., 1998). The differences brought about by technology-mediated methods challenge trainers to change the way they facilitate interactions with and between their learners.

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The Study - Examination of Learner Differences

The purpose of this exploratory study was to compare the difference in interaction perceptions between two groups of learners. Our goal was to define what attributes in learner behavior were the same or different depending on the interactive medium for learning. Two groups of learners participated in the same graduate level course titled Management, Leadership, and Team Dynamics. The difference between the two groups was related to the medium used for curriculum delivery and student interaction. Medium A was a live, traditional in-class interaction between the instructor and the students. Medium B was a technology-based interface between the instructor and the students that allowed for synchronous and asynchronous communication without any face-to-face interaction. Learners self-selected to the group and medium that was most appropriate to their personal needs.

The traditional in-class group (Medium A) met once a week for three hours during an eight-week period. A Professor, who had taught the course multiple times, delivered the curriculum in lecture and discussion format. The technology-mediated learners (Medium B) received a three-hour videotape each week of the lecture and discussion that occurred in class. The expectations, reading materials and assignments were the same for the face-to-face learner group and the technology-mediated learner group. The learners were segmented into smaller teams of four to seven participants and were required to submit five team assignments. In addition to the three-hour class period, the Medium A learners met as smaller teams for approximately two hours per week to complete assignments. The Medium B learners used an Internet based education service to participate in synchronous team meetings, asynchronous bulletin board discussions and synchronous discussion sessions which were facilitated by a post-graduate teaching fellow.

During this course and others we have participated in, we observed differences in learner-to-learner interaction when comparing Medium A and Medium B learners. The observations sparked a curiosity to examine the issue in a quantifiable manner. We decided to solicit the learners to identify their perceptions of interaction. Three primary levels of interaction were identified and defined: contribution, hard-type communication, and soft-type communication. The three primary levels of interaction were defined by the researchers for this exploratory study. The contribution construct relates to a learner's perception of the level of contribution or effort they expended throughout the experience in relation to previous learning experiences. The hard-type interaction related to the learner's perception of communication based on our five hard interaction variables: boldness, conflicts, confrontation, frankness and frustration. The soft-type interaction related to the learner's perception of communication based on our three soft interaction variables: disclosure, encouragement and personableness. Table 1 illustrates the constructs, variables and definitions that were used in the survey.

Table 1. Identification of Constructs and Variables for the Study

Activity Construct	Hard Interaction Construct	Soft Interaction Construct
Variable 1 – Accountability Was there a measure of consequences for actions?	**Variable 1- Boldness** Were opinions expressed with forcefulness?	**Variable 1- Disclosure** Were interactions "shallow or deep?"
Variable 2- Contribution Did students "pull their own weight?"	**Variable 2- Conflicts** Did disagreements occur?	**Variable 2 – Encouragement** Was there supportive and reassuring communications?
	Variable 3- Confrontation Were there challenges to attitudes or actions?	**Variable 3 – Personableness** Was personality communicated through interactions?
	Variable 4 – Frankness Was there candid and straightforward communications?	
	Variable 5- Frustration Were expressions of anger, disappointment or lack of fulfillment present?	

Research Questions

The following three research questions were established as we constructed the study and the data collection instrument.

Research Question 1: Is the perception of contribution of face-to-face learners (Medium A) different from the perception of technology-mediated learners (Medium B)?

Research Question 2: Is the hard-type interaction between face-to-face learners (Medium A) different than technology-mediated learners (Medium B)?

Research Question 3: Is the soft-type interaction between face-to-face learners (Medium A) different than technology-mediated learners (Medium B)?

Methods

We used a survey instrument designed to measure three constructs of the perceptions of learner interaction. The survey consisted of ten two-part questions that asked the learners to rate their perceptions of interaction involving themselves and their co-learners. We wanted to determine if the in-class and technology-mediated learners had different perceptions of the degree of activity/work load, hard aspects of learner communication and soft aspects of learner communication. Each question asked for the learner to reflect on their personal involvement perception and their observations of other learners in the class interactions. Available ratings for each of the variables were significantly more, moderately more, moderately less, and significantly less. The learners were asked to relate their experience in the class to their previous experiences as a learner. The respondents were asked to identify themselves as a technology-mediated student or traditional in-class student. They were not asked for any additional personal information.

Subjects

A convenience sample was used for this exploratory study. The subjects for the study are graduate students enrolled in a Master of Business Administration program at a state university. All learners have received a Bachelor's Degree and have at least three years of work experience since graduation. The technology-mediated learners (Method B) were geographically dispersed across the continuous 48 States in addition to a few sojourning participants located in Europe, South America and Japan. The traditional classroom students (Method A) lived within a 50-mile radius of the University. There appeared to be an equal amount of male and female learners. Ethnicity, income and industry variables were not measured in this study.

Data Gathering Procedure

The group of Method A learners included 19 possible subjects. The voluntary survey was distributed during the last class meeting and 15 completed surveys were returned. The population of Method B learners included 249 possible subjects. An electronic message was posted for all technology-mediated learners. The message included a request that all students complete the survey that was posted on a separate web site. The survey was written as a HTML form and the participants were given the opportunity to complete the survey on-line. The surveys that were completed on line were converted to anonymous email messages and sent to the researchers. A request was made to complete the on-line survey within two weeks, at the end of the two-week period 39 completed surveys had been returned from the Method B learners. In an attempt to create equal groups, 15 surveys were randomly selected from the 39 completed surveys submitted by the Method B learners to match the 15 surveys collected from the Method A learners.

Data Analysis

The data from the survey responses were entered into a SPSS table and one way ANOVA calculations were performed to test the variables associated with: contribution, hard interaction, and soft interaction.

Activity Construct

The variables for the activity construct included accountability and contribution. The data for level of activity was analyzed using an ANOVA analysis calculation and the results indicated a significant difference between the two groups of learners (Table 2). From an examination of the means, the Method A students have indicated that they have the greater perception of activity/workload when compared to the Method B learners.

Table 2: ANOVA Table for Activity Construct

ANOVA

ACTIVITY

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.700	1	2.700	11.383	.002
Within Groups	6.642	28	.237		
Total	9.342	29			

Soft Interaction Construct

The variables for the soft interaction construct included disclosure, encouragement, and personableness. The data for the soft interaction variables was compared using the ANOVA calculations and no significant difference was indicated.

Table 3: ANOVA Table for Soft Interaction Construct

ANOVA

SOFT

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.63E-02	1	1.63E-02	.058	.811
Within Groups	7.871	28	.281		
Total	7.887	29			

Hard Interaction Construct

The variables for the hard interaction construct included boldness, conflict, confrontation, frankness, and frustration. The data analysis for the hard interaction was analyzed using an ANOVA calculation. There is a significant difference between the hard interaction variables when comparing the Method B and Method A learners. The plot of means reveals that the technology-mediated students have more hard side communication in their interactions.

Table 4: ANOVA Table for Hard Interaction Construct

ANOVA

HARD

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.566	1	.566	2.312	.140
Within Groups	6.861	28	.245		
Total	7.427	29			

Conclusions

Answers to the Research Questions

As a result of the data collected from the learners and the statistical analysis we have performed, the following answers to the research questions are presented.

Research Question 1: Is the perception of contribution of face-to-face learners (Medium A) different from the perception of technology-mediated learners (Medium B)? Yes, because of the perceptions of accountability and contribution, face-to-face learners perceive a higher level of activity when compared to technology-mediated learners.

Research Question 2: Is the hard-type interaction between face-to-face learners (Medium A) different than technology-mediated learners (Medium B)? Yes, technology-mediated learners perceive a higher level of hard-type interaction when compared to face-to-face learners.

Research Question 3: Is the soft-type interaction between face-to-face learners (Medium A) different than technology-mediated learners (Medium B)? No, there is no difference in the soft-type interaction when comparing face-to-face learners and technology-mediated learners.

Implications

As a result of this study we believe the following inferences can be made:

- Facilitators of technology-mediated learning experiences may need to increase the individual accountability aspects of the experience.
- Because the technology-mediated learners do not have to communicate "face-to-face," they are more likely to interact on a hard level.
- Facilitators of technology-mediated learning experiences should be aware that some hard levels of interaction may need to be mediated.

- Because the level of soft interaction was equal between the two groups, the technology-mediated learners do not perceive the technology-based media as being without human factors.
- Learners who are intimidated by the technology-mediated technology may need to become aware of the occurrences of soft interaction.

Eight Strategies for Mediating Trainee Interaction

The following eight strategies for mediating trainee interaction have been provided to assist trainers who choose to use technology-mediated training methods. We suggest that trainers consider these themes in designing and conducting any training that utilizes technology.

Strategies Based on Activity Construct

Strategy 1: If the trainees will be working within groups, require the groups to write an agreement or charter that will define levels of contribution and commitment.

Strategy 2: Increase accountability by requiring trainees to write self-assessments and team member assessments.

Strategies Based on Hard Interaction Construct

Strategy 3: Be prepared as a trainer to mediate interactions between students that involve an increased level of boldness, conflict, confrontation, frankness and frustration. These situations may occur more frequently than a typical face-to-face arrangement.

Strategy 4: Prepare your trainees by communicating to them the possibility of encountering an increased level of boldness, conflict, confrontation, frankness and frustration.

Strategy 5: When trainees use take advantage of the anonymity and make bold statements, use the opportunity to challenge ideas and facilitate a deeper level of communication.

Strategy 6: Be prepared to moderate conflicts and discussions between trainees that become heated or emotional

Strategy 7: When students present an unexpected attitude, take the opportunity to challenge the attitude and pursue a deeper understanding of their perspective.

Strategy 8: Take notice of trainees who appear to be uncomfortable with the level of interaction and encourage them to stretch beyond their comfort zone.

Summary

Technology-mediated training methods have an interaction effect on trainees that should be addressed by trainers who incorporate the methods. The trainees who are learning at a distance, through technology-mediated methods, are more likely to use hard interaction characteristics and need additional aspects of accountability. It is also important to note that technology-mediated methods are not sterile, personality-less environments. Because of the differences in learner interaction, trainers must understand and become skilled in facilitating technology-mediated interactions. Trainers can make efforts to incorporate strategies to ensure the success and satisfaction of their trainees.

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The Determination of Factors Affecting User Acceptance of a Computer-Based Training Support Tool in the Workplace

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Computer-based training support systems now make it possible for employees to manage their own training solutions right at their desktop. As a result, it is critical for educators to know and understand the factors that influence the user acceptance of these systems. This study attempts to identify and empirically test factors thought to influence the user acceptance of a training support system among selected employees at a government agency headquartered in Maryland.

Keywords: Autonomy, Self-Directed Learning, User Acceptance

Human resource developers are increasingly being challenged to meet just-in-time training needs. To enable "competent human performance" (doing what the job requires, when it is required) and measure the impact of training on that performance, employees must be willing and able to access computer-based training on demand (Shandler, 1996, p. 21). The purpose of this research is to identify and empirically test factors that may influence the user acceptance of a computer-based training support system. For this study, user acceptance means that a person will use a computer-based training support tool to meet most, if not all, of his or her education and training needs.

Theoretical Framework

Literature from across a number of different areas was reviewed for this study. These areas included human resource development, adult education, instructional systems, psychology, human-computer interaction, computer-based training, business management, computer science, information systems, and organizational management. The applicable literature found to support this study can be summarized into the following four topical areas.

Self-Direction in Learning

In Adult Education, autonomy becomes the central component for the understanding of adults as self-directed learners. Chene (1983) identifies three major elements of an autonomous learner: independence, the ability to make critical judgments or decisions, and the ability to articulate the norms and limits of a learning society. Candy (1991) adds to Chene's perception of the autonomous learner by characterizing autonomous people as those with a strong sense of personal values and beliefs. These values and beliefs provide them with a firm foundation for conceiving goals and plans, exercising freedom of choice, using rational reflection, having will power to follow through, and exercising self-restraint and self-discipline.

"Much of the research into personal autonomy has been based on the notion that it is a context-free disposition; once people 'become' autonomous, they will behave autonomously in whatever situation they find themselves" (Candy, 1991, p. 114). But, as Candy points out, there are two flaws with this line of reasoning. First, autonomy is not a product but is more akin to a process. This means that an individual does not "become" autonomous in the absolute sense. Instead the individual is able to think and act autonomously dependent upon the situation or circumstances at the time. Second, although some adults display more self-assurance or clarity of purpose across a range of situations when compared to others, it is impossible to judge whether or not an individual is autonomous without identifying the context within which this autonomy will, or might, manifest itself.

As a result, Candy (1991) is urging researchers to adopt an "interpreter research approach," an approach that allows for individual features rather than ignoring or denying their existence. At the core of the interpretative orientation are the purposes, intentions, and frames of reference every adult learner brings to bear on each learning

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situation or circumstance. These three factors have the ability to influence everything from the individual's initial willingness to engage, to the type of help sought and resources used, to the outcomes that emerge from any learning encounter.

Too, there is a crucial dichotomy in the meaning of self-direction. The distinction is between self-management, "the variable quality of being self-directing within one's field of constraints of free actions," and self-determination, "the variable quality of being self-directing to the extent that one is in charge of one's destiny" (Candy, 1991, p. 20). For this study, self-determination refers to the amount of control an individual feels when identifying his or her own education and training needs whereas self-management refers to an individual's ability to manage and control his or her own training plan. Although it would seem rational that self-determination would be the quality most advocated and desired, "it is arguably self-management which, in many cases, is articulated, elaborated, and attained" (Bagnall, 1987, p. 91). Both aspects of self-direction are processes, dependent on situations or circumstances at a particular time (Candy, 1991; Garrison, 1997).

Perceived Ease of Use and Usefulness

Even though there is a considerable amount of literature that focuses on the technical aspects of computer technologies, most of it is primarily written for designers and software engineers, often addressing the needs of the industry's "typical user" (whoever he or she may be). In fact, only a few studies have been conducted in which the primary focus has been upon the cognitive and affective attitudes of the end-users, typically after the subjects were introduced to a new type of computer technology. These latter studies have typically used Davis's (1986) technology acceptance model (TAM); an adaptation of Fishbein and Ajzen's (1975) theory of reasoned action (TRA).

The TAM is a highly reliable tool that can be used to predict and explain computer-related usage behavior. The model's independent variables include behavioral intentions, perceived usefulness, and perceived ease of use. Davis (1989) defines perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance" and perceived ease of use as "the degree to which a person believes that using a particular system would be free of effort" (p. 320). Using these two definitions and a multiple studies approach, Davis refined and validated two six-item scales to measure perceived usefulness and perceived ease of use. With limited exceptions (Robey, 1979; DeSanctis, 1983), this is one of the first studies to empirically validate measurements that can be used to predict the user acceptance of technology.

Computer Anxiety, Individual Characteristics, and Attitudes toward Use

Computer anxiety, software anxiety, and attitudes toward use are affective response variables (Davis, Bagozzi, and Warshaw, 1989; Fishbein and Ajzen, 1975). Attitudes indicate an individual's reaction to an object, such as a training support system, on a like-dislike continuum (Fishbein and Ajzen, 1975) whereas computer anxiety is the tendency of an individual to feel uneasy, apprehensive, or even fearful about the current or future use of computers (Raub, 1981). Similarly, software anxiety refers to the tendency of an individual to feel nervous and apprehensive about using a specific software package or application.

Researchers, most of which are in the management information systems field, continue to study computer anxiety in a variety of settings and, in doing so, investigate other variables that affect it (Igbaria and Chakrabarti, 1990; Marcoulides, Mayes, and Wiseman, 1995; Maurer, 1994). These variables typically include individual characteristics, such as age, gender, academic major, education, computer experience, and computer attitude. However, after conducting a thorough literature review on computer anxiety, the authors found it very difficult to make generalizations based upon the results of these studies. Many of the studies seem to suggest the significance of a specific attribute as it refers to computer usage, only to have the significance called into question in another similar study. Unfortunately, the majority of the research lacks focus, making it difficult to support any particular claim. The same is true for software anxiety.

Organizational Characteristics

Several studies from the management information systems field suggest both information and management support may influence the user acceptance of a training support system. In one such study, Igbaria (1993) sought to find empirical evidence to support the prediction made by Davis, Bagozzi, and Warshaw (1989) that perceived usefulness is influenced by organizational characteristics. As a result, Igbaria divided organizational characteristics into two attributes-information support (includes the presence of an information center staffed by professionals who provide recommendations and assistance to computer users when needed) and management support (includes the support and encouragement by top management to use computers). Igbaria found information support to have direct effects on perceived usefulness and attitudes toward use. He also found information support had both direct and indirect effects on behavioral intentions and perceived usage via computer anxiety and perceived usefulness. Management support was found only to have a direct effect on behavior intentions.

In this study, information support refers to the availability of on-line and off-line assistance and the accessibility of necessary on-line instructional information and training courses available through the computer-based training support system. Management support refers to top management's encouragement and the necessary allocation of resources to properly support a computer-based training support system. Management support is also a function of how much control each employee has over his or her own professional development and growth.

Hypotheses

This research was guided by individual hypotheses that predicted each of the following variables will affect the user acceptance of the computer-based training support system (TSS): behavioral intentions, perceived usefulness, self-determination, self-management, computer anxiety, software anxiety, attitudes toward use, individual and organizational characteristics.

Methodology

Research Setting

The specific purpose of this study was to identify and empirically test factors thought to influence the user acceptance of a newly integrated training support system among selected employees at a government agency headquartered in Maryland. The system, which became fully operational in July 1997, provides an interface and the capabilities necessary to electronically deliver over 400 Web-hosted computer-based training (CBT) products on demand to employees' personal computers over the Internet.

Sample

Employees selected to participate in this study were required to have an active account for the computer-based training support system and a minimal amount of experience using the Web-based tool. From 1529 possible subjects, 1020 people were invited to participate in the study. This sample population was identified using the stratified sampling technique. This ensured that the appropriate number of males and females as well as civilians and military personnel were drawn from the homogeneous subsets of the population.

Instrumentation

A questionnaire survey comprised of items taken from 12 separate subscales was developed to measure the context characteristics that might affect the user acceptance of the training support system (TSS). These subscales included individual characteristics, browser experience, computer training, information and management support, perceived usefulness, perceived ease of use, self-determination, self-management, computer anxiety, software anxiety, attitudes toward using training support systems, and behavioral intentions. Of the 1020 questionnaires distributed, 50 came back undeliverable. Respondents were given three weeks to complete and return the questionnaire either electronically via the Intranet or physically using internal mail. During the response period 446 respondents returned questionnaires, 345 electronically and 101 using internal mail. This equated to a 46% response rate.

Data Analysis

The data was entered onto a spreadsheet accessible using SPSS version 7.5 for Windows. Prior to the actual analysis, the data were checked for blatant data entry errors as well as outliers and rogue values. The one-way analysis of variance (one-way ANOVA) procedure was then used to examine the variability among the sample means. As a result, several subtle differences were discovered that suggested there might possibly be two subpopulations present within the data. There was also evidence that suggested three subscales-attitudes toward use, perceived ease of use, and software anxiety-all collected data that might have measured aspects of the same variable. Further analyses using the stepwise regression selection method strongly suggested that: (1) the civilians be grouped separately from the military personnel, (2) the perceived ease of use subscale be removed from further analysis, and (3) questions contained within the software anxiety scale that pertained to attitudes toward use be removed. A numerical value for each scale was then obtained by adding the individual item responses together for each scale. The composite reliability of each measure was then determined using Cronbach's alpha. These values ranged from a high of .9425 for perceived usefulness to a low of .5812 for computer experience.

The statistical analysis method chosen for this study was multiple regression/correlation analysis, a highly general and very flexible data-analytic system that may be used whenever a dependent variable is to be studied as a function of, or in relationship to, any factors of interest expressed as independent variables. One of the benefits of using this method was that it provided the researchers with the ability to present quantitative data in a manageable form. It also allowed the dependent variable's variation to be explained in terms of a number of other independent variables, which in this study were measurable. Furthermore, the stepwise regression selection method was used for controlling the entry and removal of independent variables from the regression models.

Results and Findings

The respondents all held various positions across a wide range of functional areas around the world. Of the 448 participants, 41% were civilians and 59% military personnel. Males outnumbered females by a ratio of 3:1. (These percentages are consistent with the population contained within the database at the time of the study: 35% civilians, 65% military and 76% male, 24% female.) Considerably more military respondents (25.8%) were requested to take courses using the TSS in comparison to the civilian respondents (13.7%). More military respondents (73.6%) than civilian respondents (33.4%) reported their intention to take computer based training courses available through the TSS to earn equivalent college credits.

The one-way ANOVA technique was used to reveal the first clues to the possible relationships that existed among the variables used within this study. These and other potential relationships were then tested using multiple regression/correlation analysis. As a result, numerous regression models were generated and compared. Below are the resulting regression models that were identified to represent the relationships among the variables.

User Acceptance as the Dependent Variable

A regression model for user acceptance (Table 1) was first derived for each of the two groups of respondents. The civilian model had an R^2 value of .203 and an F statistic of 19.985 (df = 159). The military model had an R^2 value of .124 and an F statistic of 31.341 (df = 222). Behavioral intentions (BI) were a strong predictor of user acceptance in both models whereas self-management (SM) only appeared in the civilian model. The self-management variable was removed from the military model after its t value fell significantly below two ($t = .981, p > .05$).

Table 1 – Coefficients for User Acceptance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. error	Beta		
civilian	(Constant)	-6.918	2.252		-3.072	.003
	BI	.510	.088	.414	5.806	.000
	SM	.112	.048	.165	2.317	.022
military	(Constant)	-4.182	2.235		-1.871	.063
	BI	.780	.139	.352	5.598	.000

Behavioral Intentions as the Dependent Variable

A regression model for behavioral intentions (Table 2) was then derived for the two groups of respondents. The civilian model had an R^2 value of .465 and an F statistic of 37.121 ($df = 175$). The military model had an R^2 value of .412 and an F statistic of 41.720 ($df = 242$). Attitudes toward use (ATU), perceived usefulness (PU), educational level (EDLEVEL) and browser experience (BROWEXP) were predictors of behavioral intentions in both models.

Table 2 – Coefficients for Behavioral Intentions

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. error	Beta		
civilian	(Constant)	4.145	1.177		3.521	.001
	ATU	.129	.057	.178	2.246	.026
	PU	.292	.051	.438	5.684	.000
	EDLEVEL	-.611	.130	-.279	-4.716	.000
	BROWEXP	.197	.062	.192	3.192	.002
military	(Constant)	5.084	.956		5.320	.000
	ATU	.163	.040	.249	4.100	.000
	PU	.219	.037	.362	5.865	.000
	EDLEVEL	-.241	.119	-.101	-2.019	.045
	BROWEXP	.198	.047	.216	4.174	.000

Perceived Usefulness as the Dependent Variable

A regression model for perceived usefulness (Table 3) was separately derived for the civilians and military personnel. The civilian model had an R^2 value of .509 and an *F* statistic of 86.530 (*df* = 169). The military model had an R^2 value of .435 and an *F* statistic of 60.421 (*df* = 238). Attitudes toward use (ATU) and management support (MS) were strong predictors of perceived usefulness in both models. Computer anxiety (SA) was a predictor only in the military regression model.

Table 3 – Coefficients for Perceived Usefulness

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. error	Beta		
civilian	(Constant)	5.215	1.441		3.618	.000
	ATU	.672	.063	.614	10.736	.000
	MS	.301	.080	.216	3.772	.000
military	(Constant)	1.256	1.973		.637	.525
	ATU	.447	.062	.404	7.248	.000
	MS	.349	.064	.279	5.428	.000
	CA	.220	.054	.219	4.117	.000

Attitudes toward Use as the Dependent Variable

The last dependent variable investigated was attitudes toward use (Table 4). Again, a regression model was derived for the civilian respondents and another for the military respondents. The civilian model had an R^2 value of .625 and an F statistic of 92.261 (df = 169). The military model had an R^2 value of .679 and an F statistic of 161.497 (df = 232). Software anxiety (SA) and information support (IS) were strong predictors of attitudes toward use in both models. Self-determination was a predictor only in the civilian model. Self-determination (SD) was removed from the military model because its t value fell significantly below 2 (t = 1.077, p = .282). Gender was a predictor only in the military model. Similarly, gender was removed from the civilian model because its t value fell significantly below 2 (t = 1.155, p = .250). Age was not a factor in either regression model.

Table 4 – Coefficients for Attitudes toward Use

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. error	Beta		
civilian	(Constant)	-40.414	4.063		-9.947	.000
	SD	-.091	.048	-.098	-1.902	.059
	IS	.646	.075	.424	8.597	.000
	SA	1.053	.092	.599	11.401	.000
military	(Constant)	-44.851	3.544		-12.657	.000
	IS	.449	.051	.362	8.839	.000
	SA	1.111	.079	.583	14.000	.000
	GENDER	.914	.356	.098	2.565	.011

Conclusions and Recommendations

The results from the multiple regression analysis indicated that the determinants selected to approximate the user acceptance of the TSS differed slightly between the civilian and military respondents. The most notable difference was that self-determination and self-management were not present in the military's structural model but were in the civilian's structural model. The civilian model indicates that as self-management increases, the user acceptance increases. The effect of self-determination on user acceptance, on the other hand, was mediated by attitudes toward use, perceived usefulness, and behavioral intentions. Furthermore, as self-determination increases, attitudes toward use decrease.

The results across both groups confirm the importance of individual and organizational characteristics in influencing perceived usefulness. The results found that perceived usefulness plays a very important role in mediating the relationships between attitudes toward use and management support, and behavioral intentions. Educational level and browser experience also had a direct relationship with behavioral intentions. Behavioral intentions had a direct effect on user acceptance.

The statistical analyses in this study revealed that behavioral intention is the primary determinant for the user acceptance of a training support system. Users' acceptance of a training support system can be reasonably well predicted from their intentions. Furthermore, the results also demonstrated that determinants selected to approximate the user acceptance of the training support system differed between the civilian and military respondents. The results suggested that the civilian respondents were more autonomous and more concerned about the system's perceived usefulness than the military personnel.

It is recommended that autonomy become the central component for understanding adults as self-directed learners. For contemporary organizations, such as those described by Shandler (1996), management must be willing to address the unique attributes of new professionals. Today's professionals, for example, have expertise gained from prolonged specialized training. They often expect to be given the opportunity to determine and manage their own educational and training needs. Moreover, they tend to be fully committed to their work and profession (Von Glinow, 1988). These attributes need to be reflected in the training support systems used within these organizations.

Limitations

Although the results from this study are useful for describing the characteristics of a large population, the generalization of the results are limited to the population sample of the governmental agency used in this study. Agency employees are not completely representative of the entire population of professionals. These employees are younger and, as a group, probably more computer literate than their counterparts in industry and education. Hence, ease of use may have been less of an issue for this sample than it would have been for professionals more generally. The computer-based training support system investigated, while typical of the types of training support systems available, is still only one system. With more difficult or complex systems, ease of use may have had a greater impact on intentions.

Another limitation may have been the usage measures. These measures were self-reported as opposed to objectively measured. It is not known how accurately self-reports reflected actual behavior. Likewise, most of the variables in this study were based on people's subjective feelings and did not necessarily reflect objective reality.

However, this limitation was overcome by having access to: (1) the number of system accounts that had been activated, (2) the average number of courses that have been completed per account holder, and (3) the types of problems/concerns most frequently addressed by support personnel.

Research Contributions

This study makes several significant research contributions to the field of HRD. First, in the necessity for HRD to provide just-in-time training, often computer-based, this research makes a major contribution by investigating factors that affect CBT. This study also contributes to a further understanding of adult learners and issues of autonomy and training so trainers can access learner's readiness to use CBT. This study determined to what extent self-determination and self-management, in correlation with the other independent variables, influenced the user acceptance of a training support system. A major goal in this investigation was to determine the relationship that these two dimensions had on the user acceptance of such as system. Now that these relationships are better understood, corrective action can be taken to increase the likelihood that more users will accept future training support systems.

Second, the study contributes to HRD research. By including self-determination and self-management in this study, this research has helped to expand the understanding of autonomy, particularly the aspects of self-determination and self-management as it relates to training and adult education. One future question to be researched is which of these two personal qualities is more predictive when it comes to the user acceptance of a training support system?

Third, this study has highlighted the potential for the field of adult education to inform other areas of study. Unfortunately a number of researchers and practitioners have overlooked the contributions adult education has made, typically through the lack of knowledge or proper understanding of the field. This study highlighted the fact that adult education can provide meaning to other areas, such as informational systems, management information systems, social psychology, and organizational behavior.

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Distance Education at the University of the West Indies - Positioning the Institution as a Catalyst for Human Resource Development in the Caribbean region: A Case Study

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The data show that the UWI appears to have made progress in the production of course materials and in the number of courses being offered through distance education. The UWI has also made progress in the quantity and quality of its distance materials and progress in the enrolment of distance students and in student support services, but there are still quality issues revolving around the timely production and shipping of the materials. While there is increasing acceptance by the University's faculty of the need to adapt traditional instructional development styles for distance, this transition remains one of the challenges of the University's overall distance education program.

Keywords: Dual Mode Institution, Regional Distance Education, HRD Via Distance Education

In 1983 the University took on distance as a major thrust. It obtained funding from numerous sources (UWIDITE Report 1986-1993) to expand its operations. This expansion in the 80s was set up as the University of the West Indies Distance Teaching Experiment (UWIDITE). The stage had been set for the development of UWIDEC's expansion in distance education from a 1993 Caribbean Development Bank loan of "$US9.896 million and a grant of $US0.211 million over three years" (UWIDITE Report, 1986-1993, p.1). The loan funds provided for the technical expansion to accommodate simultaneous audio-conferencing capabilities to the sites across the Caribbean. It would also enable the Centre to establish computer labs at the sites and facilitate the acquisition of audio/video teaching possibilities through compressed video technology. The University has moved apace with its plan to maximize its effort in positioning itself as a major force in the education of adults, and in 1996 became a dual mode institution offering courses by distance alongside the 50-year tradition of on-campus classes. In a speech by the Vice Chancellor, at his installation ceremony, Professor Rex Nettleford noted:

> The UWI must now be seen as part of an articulated educational system operating within and beyond national and regional boundaries . . . [by] deepening and heightening the commitment to distance education as a priority and bring into the loop of UWI's outreach the entire academic staff and thus afford to the increasing willing numbers greater access to quality university education. (1999, p. 3).

The Vice Chancellor of the University Professor, Rex Nettleford, has also been very declarative about the critical role the University had to play in the development of the region's people.

> Many of the UWI's early scholars understood "a university is a living organism that draws its nutrients from the society it serves and that cloistered isolation in an ivory tower by scholars who see their remit exclusively in the past rather than correspondingly in the present, itself tomorrow's past, is a recipe for irrelevance ... It is in this sense that the University of the West Indies can happily reclaim its central role in making it possible for the future Caricom Caribbean to build up the capability for self development and the capacity to respond innovatively and sensitively to the unpredictable shifts of change in a world in doubt at the end of [the] century (1999, pp. 8-9).

Problem Statement and Theoretical Framework

The University of the West Indies has found itself in the mix of a growing number of North American universities vying for the brightest and the best of the region's potential students who cannot find places in the lecture halls. The UWI is cognizant of the competition and of its advantage in knowing the region and the diverse needs of its potential students within the wider geographic area of the Caribbean. Notwithstanding, UWI understands that complacency does not guarantee dominance even in the face of such advantage. The Renwick, Shale, and Rao (1992) report was instructive. The report found that enrolments from the Non-Campus Countries (NCCs) had

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declined during the years 1989-1990; for example in 1960-61, NCC countries represented 13% of the enrolment while in 1989-90 enrolment declined to 5%. The report also noted the need for an organized department to properly execute the distance courses of the University's programs. The University felt the push towards distance delivery could boost enrolment from NCCs.

> Consequently, distance education at UWI must quickly establish an image of quality in content; effectiveness and timeliness in service to students; flexiblity and responsiveness to faculty and University representatives; competence, responsibility and accountability in the relationship with the University hierarchy and non-University consumers of its service. (p. 12, Distance Education at the University of the West Indies - Strategic Plan, September 1996).

Since the inception of the dual mode initiative there has been no study or evaluative process of distance education process within the context of the dual mode operation. This study therefore sought to answer the following propositions: (a) The Distance Education Centre has played a role in improving production and delivery of material appropriate for distance students; (b) The Distance Education Centre has played a role in facilitating the retention and increase in student enrolments, impacted traditional students strong desire to use materials designed for distance students, and facilitated the transition of traditional instructors to the distance mode.

Several theories inform this paper. The history of the development of distance education at the University of the West Indies seems grounded in the foundation theories of general education. In fact, Keegan's (1993) theory of distance education bears strong resemblance to the UWI's distance operations. Keegan feels that "distance education can be seen from the perspective of three developmental stages – correspondence, teleconferencing, and computer-based learning" (p. 17). He further believes that the foundation theories of distance education really emanate from the grounded theories of the general education. Garrison (1989), on the other hand, feels that technology plays a greater role in the way distance education is shaped and argues that technology and distance education are not mutually exclusive, and that much of the theory and practice in distance education has evolved because of sophisticated instructional technology.

Central to higher education, and by extension higher education through distance mode, is the theory of adult learning. Verduin and Clark (1991) have identified self-directedness as a necessary ingredient for successful distance learning. The notion of self -directed learning was antithetical to traditional pedagogy and it was this notion that led to research which found that adults were in many cases in charge of most of their learning situations. Researchers like Houle (1984) and Tough (1978) conducted studies to define self-directed learning as a valid way for the adult learner to take charge of his or her own success in the adult learning environment. They found that the adult learner was capable of directing his or her own learning assignments for a greater percentage of the learning transaction. In addition, traditional classrooms are rationalizing their approach as the use of technology presents challenging possibilities for learners. Keegan (1995) has posited that the impact of new technologies on distance education could even change the traditional definition of distance education to incorporate the notion of a virtual classroom. He has suggested that interaction through face-to-face, live two-way audio and video communication is possible with the virtual classroom "electronically linking instructor and students at various locations" (p. 3). Knapper (1990) has added that the technological advances do not only have the potential to reduce the physical distance in distance education, but can also reduce the psychological distance in affording the learner who really has a preference for independent study to take advantage of distance education courses. It is this potential that has not eluded the University of the West Indies, and as Hoffman (1995) stated, it may be instructive to combine the traditional mode of education with the distance education mode.

Methodology

This is a qualitative study based on longitudinal observations at a traditional University in the Caribbean at its originating campus (Mona, Jamaica). The institution offers courses leading to the baccalaureate, masters, and doctoral degrees. The institution is 50 years old and this year had enrolment of 11,045 students including 1,607 distance students (Campus Principal, October 1999).

Researcher as Instrument

The writer of this paper has been an observer of the distance education process at the University of the West Indies since the early 1980s. These earlier approaches have provided data to place the current paper into contextual perspective. Research culminating in the production of this paper continued in May 1999 using the Mona experience as the case. The research process continued through one-on-one exploratory interviews, examination of documents and ongoing observations of all aspects of the distance education operations at the UWI. Data were collected solely by the writer who brought some bias to the research process. One obvious bias was the notion that distance education is different from traditional education and that by definition distance education requires different approaches. Another obvious bias was that distance education requires new approaches in instructional techniques for traditional staff, ongoing training for transition, and initiation programs for new members of the educational community in a dual mode institution.

Data Collection, Analysis and Interpretation

Observations involved examining documents pertaining to distance education, and open coding was done in the categories of structure, production, delivery of material, structure of the organization, quantity and quality of distance education materials, student enrolment and retention, and faculty preparation and involvement in distance education. These data were verified through triangulation. Data collected from interviews were verified through secondary data and by cross-referencing with distance education senior staff, departmental reports, and existing distance education reports.

Data were verified in a second round of data collection during one-on-one meeting with faculty writing for distance; attendance and discussion at distance education curriculum meetings; discussions with senior management of the DEC; observation of students studying via distance education through audio-conferences, and consultations with agencies using the distance education facilities. These data were validated by records of meetings and through personal communication with individuals working in distance education at UWI. In the case of student enrolment, the data were verified through triangulation of figures presented from DEC Mona, Registration, Mona, and from the Principal's office, Mona. Where there were discrepancies in these figures the researcher deferred to the figures from the Principal's office. The data were coded according to the propositions posited for this paper. The findings are presented herewith and the writer would like to caution that no generalizations should be inferred from the data to the wider community of distance education; rather, the data is case related and very limited in scope. However, while this is so, it is fair to suggest that although this data originated from one of the three major campuses at the University of the West Indies, some generalizations of the findings can be attributed to the entire University's distance education program.

Findings, Conclusions and Limitations

Since 1996, when the Distance Education Centre was established, the distance education operations of the University have been organized and managed to cater to 26 sites, 10 of which are intra-island (Jamaica). The Centre falls under the Board of Non-Campus Countries and Distance Education under the direction of a Pro-Vice Chancellor (see Figure 1).

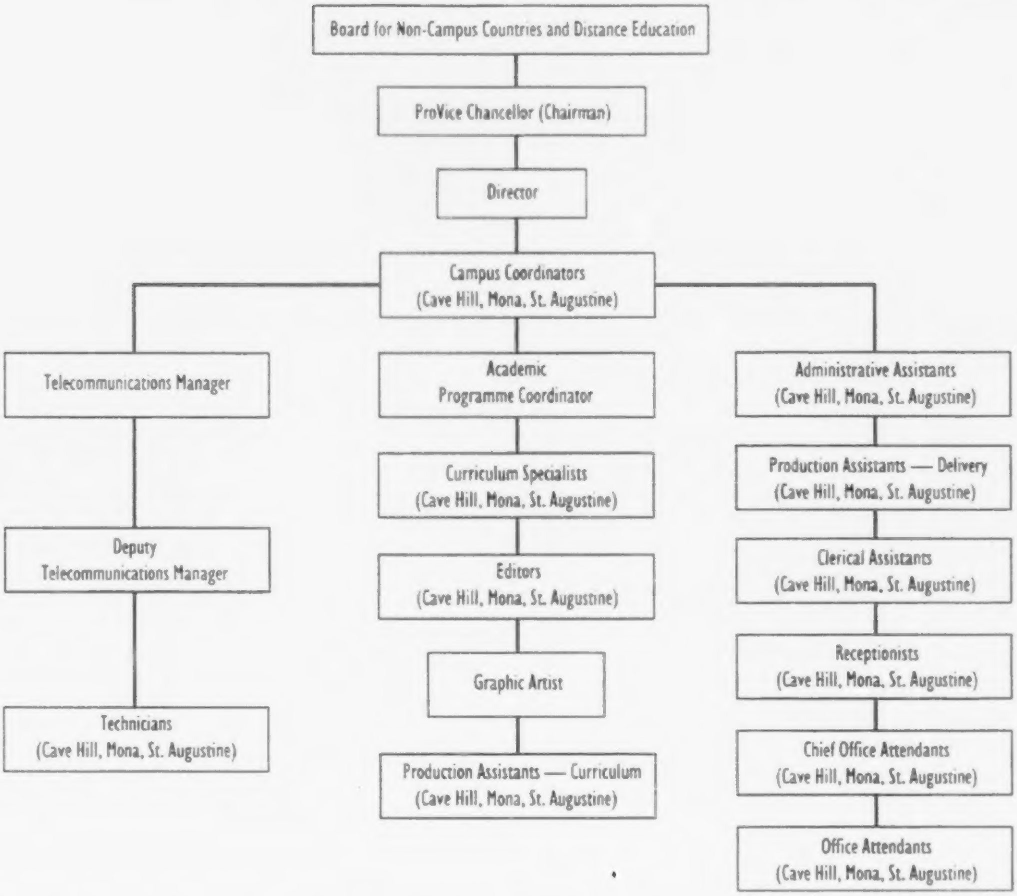
Board for Non-Campus Countries and Distance Education
ProVice Chancellor (Chairman)
Director
Campus Coordinators (Cave Hill, Mona, St. Augustine)
Telecommunications Manager
Academic Programme Coordinator
Administrative Assistants (Cave Hill, Mona, St. Augustine)
Curriculum Specialists (Cave Hill, Mona, St. Augustine)
Production Assistants — Delivery (Cave Hill, Mona, St. Augustine)
Deputy Telecommunications Manager
Editors (Cave Hill, Mona, St. Augustine)
Clerical Assistants (Cave Hill, Mona, St. Augustine)
Receptionists (Cave Hill, Mona, St. Augustine)
Graphic Artist
Technicians (Cave Hill, Mona, St. Augustine)
Chief Office Attendants (Cave Hill, Mona, St. Augustine)
Production Assistants — Curriculum (Cave Hill, Mona, St. Augustine)
Office Attendants (Cave Hill, Mona, St. Augustine)

Figure 1. Distance Education Centre Organizational Chart-Does not represent extended activities of distance sites

Decisions for distance education fall within the purview of the Pro-Vice Chancellor for BNCCDE and the organizational structure indicates a definite industrial process enunciating a team rather than an individual process. This organizational structure represents a radical shift from the previous operations of UWIDITE which operated with just 7 persons, (UWIDITE report 1986-1993) with many doubling in roles. The current operations of UWIDEC are structured along clearly defined roles. Although the structure is clearly defined with faculty playing a critical role, there is still difficulty incorporating faculty within this structure. With a structured Distance Education Centre, most Course Packages are organized along a print-driven mode based on a systems design development scheme (see Figure 2).

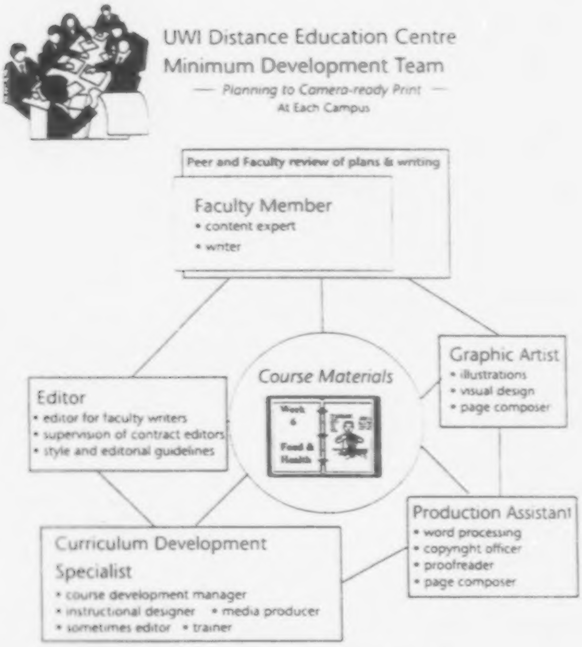
UWI Distance Education Centre
Minimum Development Team
— Planning to Camera-ready Print —
At Each Campus
Peer and Faculty review of plans & writing
Faculty Member
• content expert
• writer
Course Materials
Week 6
Food & Health
Graphic Artist
• illustrations
• visual design
• page composer
Editor
• editor for faculty writers
• supervision of contract editors
• style and editorial guidelines
Production Assistant
• word processing
• copyright officer
• proofreader
• page composer
Curriculum Development Specialist
• course development manager
• instructional designer
• media producer
• sometimes editor
• trainer

Figure 2. UWI Distance Education Centre Minimum Development Team
(Adapted from Handbook - Quality Assurance Standards, 1997, DEC.)

As you can see in Figure 2, there are several quality processes and interchanges with faculty/course writers before the student finally gets the material.

Since 1996 UWIDEC has instituted a system of quality standards for the production of materials for the distance students. The Centre has moved towards a primarily print-based delivery away from the traditional oral-delivery via the audio-conferencing network. The typical delivery style at the University is print-driven with tutorial and telecommunication support. The Curriculum Development Unit of the Centre develops and produces the distance education material and since 1996 the CDUs have developed print-based materials for programs in education, construction management, the Social Sciences and applied sciences. UWIDEC warehouses the materials for these courses and these are shipped out to the students at the distance sites at the beginning of each semester. At present there is no built-in quality check at the faculty level with respect to content through peer review or otherwise, or at the printers to see that materials are up to par before actual delivery. However, after the final editing, the course writer is asked to verify that the final product is accurate in content and style. The Curriculum Development Unit (Mona) is suggesting a new system where faculty will physically sign off to the authenticity of materials. The dual mode system does not absolve the faculty or the content expert of the ultimate responsibility for the content.

In June 1999 at a Curriculum Development Meeting in Barbados, participants discussed and rationalized the nomenclature of the Course Package to make it reflective of its content. For example, self-instructional materials to be developed as of that date will be called "Course Materials", with the title page reflecting the subject name. The participants at the meeting also reinforced the University's commitment to creating its own self-instructional materials relevant to the needs of the region.

Although the University has a structured system (see Figure 2) for the production and delivery of materials for the distance students, the program is not without its setbacks. In many instances, the writers of distance education materials are the same faculty who have heavy workloads teaching face-to-face students and find deadlines for completion of course materials difficult to meet. This sometimes resulted in piece-meal distribution to the students and less than ideal packaging.

UWIDEC Facilitating Increased Enrolment and Retention

The establishment of University sites and the creation of computer laboratories for the distance sites have given access to the distance students which they might not otherwise have had, for example, the use of the internet, email and word processing. The data show that despite setbacks and complaints there is growing interest and increased enrolment as reflected in Table 1. For example, "the inaugural teleconference in March 1983 had only 5 sites . . . However expansion in the telecommunications industry now allows [UWIDEC] to reach [26] sites in [14] countries around the region" (Odle, K. 1996, p. 3).

Table 1
UWIDEC Student Enrollment

	1996/97	1997/98	1998/99
Total Student Body	10,137	10,652	11,045
Males	32%	30%	29%
Females	68%	70%	71%
Jamaicans	8,379 (82.6%)	9,289 (87%)	10,005 (90.6%)
Other cont. territories	1,605 (15.8%)	1,221 (11.5%)	894 (8%)
Guyana & Turks & Caicos	56 (0.6%)	54 (0.5%)	47 (0.4%)
Other Countries	97 (1%)	88 (1%)	99 (1%)
Total On-Campus Students	8,252	8,996	9,040
Full time	5,166 (63%)	5,523 (61%)	5,717 (63%)
Part-time	3,086 (37%)	3,473 (39%)	3,323 (37%)
Total Off-Campus	1,885	1,590	2,005
Distance	1,573	1,240	1,607
Tertiary level institutions	312	350	398

Source: Principal's Office: University of the West Indies, Mona, October 1999.

According to data from the Principal's Office, (October 1999), the projected enrolment, (on-campus and off-campus) by the end of 2002 is estimated at 13,300, which is an estimated 20% increase over the 1998/99 academic year. The report to Academic Board October, 19, 1999 projects that this increase will be due "to a large extent in the expansion of distance education" (p.3).

UWIDEC Facilitating Transition of Traditional Faculty to the Distance Mode

Workshops and symposiums have been held during the early transitioning period 1995/1996 and a workshop was held as recently as May 1999 to facilitate the writing and development of the Master of Science in Family Medicine and Psychiatry program slated for the year 2000. The Centre has had several training sessions for Tutors, most of whom are instructors in TLIs (Tertiary Level Institutions) and while the Centre fields some discontent in that area, that aspect of the operation appears to be working effectively. In August 1999, UWIDEC once again embarked on a "Train the Tutor Workshop". This training exercise was designed essentially to prepare these trainees to train new inductees.

On the other hand, there has been no organized ongoing training for faculty involved with distance teaching and preparation of distance teaching material. UWIDEC has been involved in some workshops on an as-needed basis even though the strategic plan (1996) calls for ongoing training. UWIDEC has prepared a Quality Standard Manual which guides the writers of distance education, but the dynamics change so often that ongoing training in a scheduled fashion seems to be important but lacking at this time. Dirr's (1999) Commonwealth sponsored study is particularly poignant and points to the need for ongoing training and awareness. He notes that "What has proven particularly difficult to change, however, is the weaning of staff away from proprietary course development towards a team approach" (p. 54). Notwithstanding this observation the Centre has managed to implement measures to improve production and delivery of materials and has had success in gradually winning over faculty to the industrial process of distance education.

Conclusions

The new thrust for distance education and the University's serious commitment to dual mode course offerings gave rise to increased and improved student support systems in respect of distance student registration, orientation programs for distance students, in-house summer program orientations, and increased awareness about distance education. The availability and packaging of the distance education materials for the University's various academic programs, tutorial, and improved audio-conferencing systems have given rise to increased enrolment, one of the major aims of the dual mode operations. In fact, the 1998/99 enrolment figures for distance education jumped dramatically (see Table 1). The audio-conferencing system needs further upgrading and digitization to maximize the system's output. The tutorial system used at UWIDEC works in the Caribbean context, as the distance student, while accepting of distance is still mentally oriented to the traditional mode of delivery and looks forward to this contact with someone who can help to clarify or cement a point of difficulty with content. Since 1998, the University has also instituted within its library facilities direct contact for the distance students where they can (through their site coordinators) request library materials and have these couriered to their sites. However, this support program is still young and needs more coordination.

The University of the West Indies Distance Education Centre has played a vital role in carrying out the mandate of the University as a dual mode institution committed to delivery of educational programs that are as transparent in distance as they are in the face-to-face mode of delivery. The setting up of a Curriculum Development Unit in 1996/1997 has been instrumental in facilitating the development and production of self-instructional course material. This has enabled more material to be produced and marketed with some identity of quality in content and packaging. This professional look and presentation has found favor not only with the distance students, but also traditional students within the UWI and the TLIs for use of these materials in traditional face-to-face settings. The University's strong commitment to improving the print materials for distance students is a very pragmatic approach, since heavy reliance on technological means would disenfranchise a large number of prospective students. This conscious decision to embrace a print-based, manual-distribution platform appears to be a good move by the UWI given the economies of scale of other modalities and the inadequacies of technology in the region at the present time. The present platform has afforded the distance students of the region the anytime, anywhere, anyplace concept of studying without worrying about technology. However, it should be noted that the University might need to consider including some other technology as part of its ongoing improvement process as the dynamics of technology and access change.

Limitations

Although limited in scope (preliminary and exploratory), the data from this case study should provide insights to the stakeholders of the University of the West Indies with regards to its dual mode operations and by extension its role as an engine of growth in human resources development. Further, while the findings and recommendations of this case study should not be generalized beyond the population of the study, the data give rise to a new theory for greater understanding of the structure and delivery of distance education programs within the context of a dual mode institution. It also gives rise to an understanding of how the cultural change process of a University community has identified and accepted the changing needs necessary for human resource development of its constituents. Grounded in this data is the theory that the transition from traditional mode of delivery to the distance mode or a mixed mode of delivery bring with it challenges which are only conquered through training, staff development, and built-in awareness programs. In addition, despite the limitation of the study, the data suggests a valuable explanation of how a cultural change process influenced by changing needs can result in innovative programs to meet human resource development in a community.

Recommendations

Despite the embryonic success of the dual mode operation, one issue that needs greatest attention for the continued success of this operation, lies with the potential of faculty. Greater mobility and expansion still remains with how faculties perceive their role in the dual mode scenario. The University needs to provide this clarity so that faculty can adequately prepare for the smoother transition as we move into the next millennium and distance education takes on more prominence.

The University must embark on an ongoing training and initiation program to upgrade skills, create awareness for team efforts and move apace with advanced and improved technology in education. This can be planned through consultations with the Deans of the Faculties, the BNCCDE, UWIDEC and Faculty. It should be a reengineering process, a retooling to meet the changing demands and heightening of awareness in the teaching and learning acts (Verduin and Clark, 1990). The training for all concerned in distance education cannot be a one-shot approach and a "Strategic Plan for Continuous Training" should be developed and implemented. This training is essential, especially as we compete with a growing number of educational interests in the region. It is important also in the context of changing dynamics and the incorporation of new media technologies.

The University should begin needs assessment research to determine the feasibility of incorporating the use of the computer into its delivery systems as part of it overall distance education program. The notion of online education is offering tremendous possibilities for both traditional and distance education. In keeping with the thrust of most Caribbean governments to push computer literacy in preparation for the twenty-first century, it would be prudent for UWI to take the lead in offering higher education courses incorporating the use of the computer in the distance education programs and courses offered through UWIDEC. However, this should not be done without ascertaining how many of the people could truly access such programs and at what cost if implemented.

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The Use of Internet Courses in HRD Programs

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Ping-Lun Tsai

This poster presents the findings of a survey of AHRD members in an attempt to identify the use of Internet courses in Graduate HRD Programs. Of 27 valid responses, 10 offered Internet courses and 17 did not. Of these 17, two planned to add Internet courses in the future. Advantages and disadvantages, reasons for not offering Internet courses, problems in establishing Internet courses, and Internet related policies are displayed.

Keywords: Internet Courses, Web-Based Courses, Distance Learning

One of the major innovations in human resource development is the use of Internet courses as indicated in a recent ASTD National HRD Executive Survey on Learning technologies. Respondents projected that by the year 2000, 35 percent of all training will be delivered by learning technologies, and the projected top three learning technologies will be Multimedia, LAN/WAN, and the Internet/World Wide Web (ASTD, 1997). Today, many universities are changing the way they conduct programs or offer curriculum "to meet the customer's needs, to compete with other institutions and possibly even to survive" (Nixon 1998, p54). With the help of information technology, many universities are now offering Internet courses.

Those courses take advantage of information technology and are more flexible on the time and place for learning and teaching. Hence, the Internet is truly a different environment for learning and teaching. There are many questions that need to be answered. "What is different about the Web place for teaching and learning? What wisdom or knowledge might guide us in learning how to teach and learn in the new place? What design guidelines should we use" (Boettcher 1998, p45)?

Significance of the Study

This study was significant in that it helped identify the current use of Internet courses in HRD Academic Programs. It provides HRD faculty members insight into what other Universities are doing so they can keep programs current and competitive. It helped identify some of the problems that departments and faculty members had in setting up Internet courses, which should make it easier for others to develop these courses in the future. The addition of Internet courses should make graduate HRD programs more accessible to those students who have schedule or location conflicts.

Research Methodology

This was a descriptive study where questionnaires were sent to faculty members at 58 institutions and 32 (55% response rate) were returned. The first member from each university listed in the membership directory of the Academy of HRD was selected. Five questionnaires were eliminated due to incomplete responses. The final sample consisted of 27 universities that offered HRD related programs. These universities were divided into two groups for data analysis and interpretation purposes. One group included 17 universities that did not offer Internet courses in HRD graduate programs, and the other included 10 universities that offered Internet courses in HRD graduate programs.

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Related Literature

With the help of information technology, the Internet and the World Wide Web became a new environment for teaching and learning. Internet courses are the products of these two technologies. Some define Internet courses as "Distance Education Via the Internet" (Verbrugge, 1997).

Advantages of Internet Courses

The Internet provides some advantages that other distance learning methods can not offer and has the potential to compete with traditional learning methods. Advantages of Internet courses include the following:

1. Time and place flexibility. Students can log onto a class whenever and wherever they want. An instructor can work with colleagues from other locations, and institutions may cooperate with each other to share learning resources (Wulf, 1996; Glener, 1996).
2. Multi-platform capability. Using Hypertext Markup Language (HTML), and TCP/IP protocol, barriers between operating systems are reduced (Wulf, 1996; Kruse, 1997).
3. Easy, affordable distribution. Using the Internet to access course content can reduce the cost of delivering and producing learning materials (Wulf, 1996, Kruse, 1997).
4. Up-to-date content. Text and graphics can be updated in minutes, and current information can be provided, which cannot be done with video and CD-Rom (Wulf, 1996; Kruse, 1997).
5. Learner control. Students have more control of their pace and can ask for help while applying what they are learning (Wulf, 1996). "The idea of static, linear training programs has changed to a fluid and individualized learning model" (Glener, 1996, p57).
6. Potential to reach a global market. Students can access learning materials even if they are geographically isolated from training institutions (Armstrong, 1996).

Disadvantages of Internet Courses

While Internet courses provide many advantages, they also have disadvantages. These can reduce student participation, and instructor and institutional development

1. Changing nature of technology. Using video on the Internet is limited by bandwidth. The reliability of an Internet address can interrupt the learning process and affect the learning performance. Network systems are becoming more complex (Wulf, 1996; Pritchard, 1998).
2. Reliance on student initiative. Compared to traditional courses, students are more responsible for maintaining their motivation and desire to learn . Therefore, self-motivation will affect the learners' and programs' success (Wulf, 1996; Black, 1997).
3. Faculty workload. In a traditional classroom a faculty-student conversation during a class break may take 30 seconds. However, in an Internet course the student can be anywhere at anytime and information is exchanged by e-mail. This may take 2 to 3 minutes so the faculty workload may increase dramatically (Boettcher, 1998).
4. New mode of training. The Internet and World Wide Web still are new environments for trainers. Determining the appropriate training style is still a problem. Also, there is a change in the relationship between teacher and students (Westera, 1999).
5. Copyright issue. "Fair Use" has not been defined for the Internet, and putting course material on a web site may violate copyright law (Gallick 1998).
6. Accreditation. The value and prestige of a degree is based in part on the accreditation of the program and institution. Some virtual universities have no physical campus. It is hard to apply current standards to virtual universities and online courses (Gallick, 1998).
7. Privacy. In the world of the electronic network, information is transfered through a series of servers and all the servers keep a log within their database (Descy, 1997).
8. Information Overload. Most information sources students find through a web search engine are not well organized. When students search for a specific term, they may find many thousands of matches. Teachers and students need to put much effort into evaluating the accuracy and the reliability of the information found on the Internet (Descy, 1997).
9. Academic Honesty. Gray points out that with the Web-based instructional tools available today, instructors have more ways of controlling the testing environment (1998).

10. Intellectual Property. Boettcher stated that "it is important that we find ways to acknowledge the right of a faculty member to his/her own work, and the right of an institution for reasonable access to the work of faculty members" (1999, p. 36).
11. Completion Rates. Parks, a web-based training designer has found that up to 50 percent of learners are not finishing online-learning modules (1999).

Findings and Poster Exhibition

The major findings from this study are presented in the following four tables. These four tables will be presented on two posters for this session. A narrative description is also provided for some of the other survey questions.

Reasons Universities do not Offer Internet Courses

Table 1.
Reasons For not Offering Internet Courses (n= 17)

REASONS	Number	Percent
Not enough time to develop courses	13	76.4
Lack of experience to develop Internet courses	10	58.8
Lack of time to deliver and administrate courses	8	47.0
Lack of equipment	5	29.4
Not enough demand by student	3	17.6
No security for course and student information	2	11.8
Lack of location for on campus network	1	5.9

Internet Related Policies and Procedures

Table 2.
Policies and Procedures Related to Internet Courses (n= 10)

SCHOOL POLICES	Number	Percent
Technical support	7	70
Instructional design support	5	50
Intellectual property right of developer	3	30
Release time to develop courses	3	30
Smaller courses loads for teaching Internet courses	2	20

Problems in Setting up Internet Courses

Internet courses were most often developed by the instructors, and seldom or rarely developed by graduate assistants or outside providers. All ten respondents indicated their Internet courses always included text and interactive exercise and 90% of them had hyperlinks to external web site. A limited number included audio or video components. The relationship between experience and perceived advantages, perceived disadvantages and problems in setting up Internet courses should be examined.

Table 3.
Problems in Setting Up Internet Courses (n= 10)

PROBLEMS	Number	Percent
Lack of experience	6	60
Lack of staff	5	50
Security for course and student information	4	40
Lack of location for on campus network	3	30
Lack of equipment	2	20

Table 4.
Perceived Advantages and Disadvantage of Internet Courses (n= 10)

ADVANTAGES	SA	A	U	D	SD	NR	μ
Time and place flexibility	8	2	0	0	0	0	1.20
Potential to reach global audience	7	2	1	0	0	0	1.40
Multi-platform capability	3	4	3	0	0	0	2.00
Opportunity for interaction	5	1	2	1	1	0	2.20
Easy to update	3	4	2	0	1	0	2.20
Learner has more control	3	4	1	2	0	0	2.20
DISADVANTAGES	SA	A	U	D	SD	NR	μ
Increase faculty workload	6	3	0	1	0	0	1.60
Gray area for copyright law	3	1	3	3	0	0	2.60
Need to develop new mode of training	1	5	0	4	0	0	2.70
Limited bandwidth	1	1	5	2	0	1	2.89
Unreliable Internet links	1	2	2	5	0	0	3.10
Student Lack of Internet skill or computer skill	0	3	3	4	0	0	3.10
More reliance on student initiative	0	3	2	5	0	0	3.20
Instructor Lack of Internet skill or computer skill	0	3	3	2	2	0	3.30

SA= Strongly Agree, A= Agree, U= Undecided, D= Disagree, SD= Strongly Disagree, μ:=Mean

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Factors Influencing Employee Participation in Training: An Empirical Investigation

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This study tests a mediated model of employee participation in training activities in a public sector highway department. Results showed the combined predictor sets accounted for a significant proportion of the variance in an objective measure of training attended and a self-report measure of intentions to participate in training. Although the mediated model was not supported for both outcome measures, the findings suggest that adequate job-related workplace literacy skills are important factors contributing to employee participation in training.

Keywords: Employee Development, Training Participation, Basic Skills

Participation in learning, training, and other developmental activities is a major strategy for employee and organizational growth. For example, notions of continuous learning and lifelong learning stress individual responsibility and ongoing, active pursuit of learning as a means of career and personal development (Rosow & Zager, 1988). Organizations increasingly use learning to meet the adaptive demands of a dynamic environment. Organizational interest in learning and training is reflected in literature addressing 'learning organizations' (e.g., Pearn, Roderick, & Mulrooney, 1995) as well as rising investments in training, estimated at over $60 billion in 1998 (Lakewood Research, 1998). In addition, research suggests an organization's ability to learn is directly proportional to the degree to which employees themselves are willing and able to learn, change, and succeed at work (Bartel & Lichtenberg, 1987; Cohen & Levinthal, 1990). Although training is sometimes mandated to meet a variety of certification or regulatory requirements, involvement in most organizational learning and training activities is primarily a result of individual employee initiative (Noe, 1999). For these reasons, it is critical that HRD researchers and practitioners understand the individual and organizational factors that influence training participation.

Recent research at the individual level has begun to address antecedents of continuous learning and participation in training and developmental activities. Variables such as exchange of information, complexity of task assignments, perceived task uncertainty, and managerial support for development have been associated with technical updating orientation (Kozlowski & Farr, 1988; Kozlowski & Hults, 1987). Efficacy beliefs about personal skills and abilities, motivation to learn, perceived need for improvement, and social support have been found to be associated with participation in training (Maurer & Tarulli, 1994; Noe & Wilk, 1993). Research has also shown some employees receive less training than others as a function of position in an organization (lower job levels receive less training), job tenure and age (increases in each is associated with less training participation), and gender (Carnevale, Gainer, & Villet, 1991; McEnrue, 1989), suggesting organizational membership characteristics are related to training participation.

This body of research, however, has not yet addressed a number of other critical variables. For example, research has not yet examined the role that workplace literacy plays in training participation. Workplace literacy refers to the ability of individuals to effectively respond to the literacy demands of the workplace (Gowen, 1992). Workplace literacy skills are the basic skills needed by employees to successfully perform job duties, learn, and apply learning on the job. These include skills such as reading, writing, mathematics, and listening (Department of Labor, 1991). The relationship between workplace literacy, attitudes, and employee participation in development activities is important because it may influence an individual's awareness of development needs, his/her choice to participate in learning and other developmental activities, and his/her capacity to develop and improve performance through learning.

Research has also established that several dimensions of development climate can affect employee participation. These factors include both situational supports (e.g., manager feedback) and situational constraints (e.g., lack of money or time) affecting employee participation (Kozlowski & Hults, 1987). Research has not yet examined the role of more macro-level variables such as an organization's continuous learning culture (Tracey, Tannenbaum, & Kavanaugh, 1995). This is important because of the pervasive effect that an organization's culture can have on employee behavior (Noe, Wilk, Mullen, & Wanek, 1997).

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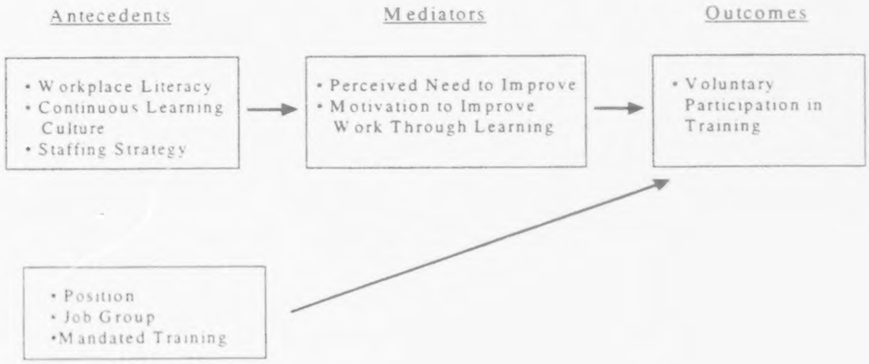
Finally, work by Sonnenfeld and Peiperl (1988) suggests that an organization's staffing policies may influence participation in training. That is, employee training attitudes and activity may be influenced by the extent to which they perceive their employer relies on the external labor market versus internal promotion to fill staffing needs. Employees in organizations that tend to promote from within rather than recruit from outside may believe that training participation is an important vehicle for promotion.

This study seeks to extend current research by examining the relationship between previously untested variables and employee participation in training. The study uses a conceptual model developed by Noe and Wilk (1993) to examine the relationship between antecedents, mediators, and training participation. The model (Figure 1), shows that the influence of workplace literacy, continuous learning culture (Tracey, Tannenbaum, & Kavanaugh, 1995), and staffing strategy is mediated by employees' need to improve performance, implicit training contract, and motivation to improve work through learning. Position in the organization is shown having a direct influence on training participation. A good deal of research has established that organizational membership variables such as position, job tenure, and so on have a significant relationship with developmental participation (Kozlowski & Farr, 1988; Kozlowski & Hults, 1987). For example, supervisors and individuals in relatively higher level positions are likely to have more opportunity to participate in training (e.g., see Lakewood Research, 1998).

Figure 1: Conceptual model of training participation


Antecedents
Mediators
Outcomes
• Workplace Literacy
• Continuous Learning Culture
• Staffing Strategy
• Perceived Need to Improve
• Motivation to Improve Work Through Learning
• Voluntary Participation in Training
• Position
• Job Group
•Mandated Training

Sample

Participants in this study are 1079 individuals employed with a state highway/transportation department in the Southern US. The following general job groups were included in the study: Mobile equipment operator, highway foreman, engineering technician (entry level), engineering technician advanced/supervisor, and highway maintenance specialist/superintendent.

Procedure

The data in this study was collected as part of a larger needs assessment project conducted to address a number of organizational issues including workplace literacy and training transfer problems. The workplace literacy assessment instruments and the survey instrument were administered under the guidance of a Needs Assessment Team, co-directed by the researcher, with the assistance of the organization's District Training Specialists. On-site District Training Specialists administered the assessments to the participants during the months of January and February 1999. Of the 1218 individuals selected to participate in the assessment, 1079 (88.5%) completed the instruments. Participants were required to attend the data collection sessions but could decline to complete the instruments if they so desired.

Antecedent Measures

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Work Keys®. Data on employee workplace literacy levels were assessed using two scales from the Work Keys® assessment system. Work Keys is a set of eight criterion-referenced basic skills assessment tests. The tests measure an individual's cognitive and interpersonal skills against the proficiency required to successfully perform a specific job. Required proficiency levels are established by profiling specific jobs across the eight skills assessed by the Work Keys® system. Work Keys measures work-related rather than academic proficiencies.

Two Work Keys skills were assessed in this study. The *reading for information* assessment measured an individual's skill in reading and understanding work-related instructions and policies. Employees were tested on their ability to understand reading passages, based on actual demands of the workplace, that were in the form of memos, bulletins, notices, letters, policy manuals, and governmental regulations. The *applied mathematics* assessment measured an individual's skill in applying mathematical reasoning to work-related problems. The assessment required the examinee to set up and solve the types of problems and to do the types of calculations that actually occurred in his/her job. Examinees could use a calculator. A formula sheet was provided that included, but was not limited to, all required formulas. For each assessment, examinees were given 40 minutes to solve 30 multiple-choice problems. Proficiency levels for these assessments were established based on jobs previously profiled by Work Keys that were functionally similar to the jobs examined in this study. Because the focus of this study was determining whether satisfactory proficiency levels of workplace literacy skills influenced voluntary participation in training, individual scores for both assessments were dummy coded based on whether the individual met or did not meet the proficiency level for his/her job. The job groups and the proficiency levels required for each are shown in Table 1.

Table 1
Required Math and Reading Levels by Job Group

	Job Group				
	1 Mobile Equip Ops	2 Hiway Foreman	3 Hiway Main Sup	4 Eng Tech (entry)	5 Eng Tech (adv)
Req'd Math Level	3	4	5	5	5
Req'd Read Level	4	4	4	5	6

Continuous Learning Culture. Continuous learning culture (Tracey et al., 1995) is a construct that assesses the extent to which individuals perceive the work environment to be supportive of learning and the use of new knowledge. It is likely that the existence of a continuous learning culture within an organization will be an effective precursor to motivation to participate in training activities. Research has shown similar such work environments influence employee attitudes and participation in development activities (Kozlowski & Hults, 1987; Noe & Wilk, 1993). Continuous learning culture was assessed with a 15-item scale (∝ = .91) developed by Tracey (1992). Sample items included "Job assignments challenge employees to learn new things" and "Co-workers are willing to listen to new ideas".

Staffing Strategy. Employees who believe their organization values expertise and prefers to develop and promote expertise from within rather than recruit it outside the organization will likely exhibit higher levels of motivation to participate in training. Individual perceptions of organizational staffing strategy was assessed by a four-item scale developed by the researcher (∝ = .74). Sample items included "This organization promotes from within rather than hiring new people from the outside" and "In this organization, higher level positions are filled by promotion from within the organization".

Both of these scales were rated on a five-point scale with anchors from (1) strongly disagree to (5) strongly agree.

Mediator Measures

This study tests the notion that employee participation in training is directly influenced by individuals belief that they need to improve performance and that effort directed at performance improvement through training will pay-off in terms of favorable outcomes. This study tested this perspective using six scales that assessed various dimensions of training-related motivation. All mediator measure used a five-point response scale with anchors from (1) strongly disagree to (5) strongly agree was used for all mediator scales.

Perceived Need to Improve. This variable was assessed using a 4-item scale (∝ = .71) developed by the researcher. This scale examined an individual's perceived need to enhance personal knowledge, skills, and abilities in order to improve job performance. Sample items included "There are areas in which I need to know more to do my job better" and "There are ways in which training can help me do my job better" .

Motivation to Improve Through Learning. This study examined a new construct, motivation to improve work through learning, as a mediator of training participation. This second order construct is posited to more completely capture training-related motivational influences because it includes both motivation to train and motivation to transfer elements (Naquin & Holton, 1999). Five scales were selected to measure this factor. Three of these scales (transfer effort – performance expectations, performance-outcome expectations, and motivation to transfer) were taken from the Learning Transfer Systems Inventory (LTSI) (Holton, Bates, & Ruona, 1999). This 68-item instrument was developed to measure factors affecting learning transfer in work settings. Exploratory factor analysis of the LTSI has revealed an exceptionally clean and interpretable sixteen-factor structure (Holton et al., 1999). The *transfer effort-performance expectations* scale is a four-item scale (∝ = .81) that assessed the extent to which individuals believed that applying skills and knowledge learned in training would improve their performance. Sample items included "My job performance improves when I use new things I have learned" and "The harder I work at learning, the better I do my job". The *performance-outcomes expectations* scale (five items, ∝ = .79) assessed the degree to which individuals believed that applying skills and knowledge learned in training would lead to recognition they value (e.g., "When I do something to improve my performance, good things happen to me"). These two scales address expectancy beliefs about the capacity of training to improve performance and the likelihood that changes in performance will lead to outcomes valued by the individual. The *motivation to transfer learning* scale (four items, ∝ = .80) examined the degree to which individuals were motivated to utilize new learning on the job. Items included "Training increases by personal productivity" and "I get excited about using my new learning".

Two other scales were used to assess motivation to improve work through learning. These scales were taken from the Strategic Assessment of Readiness for Training_(START) instrument. The START instrument (Weinstein, Palmer, Hanson, Dierking, McCann, Soper, & Nath, 1994) consists of eight 7-item scales designed to provide a diagnostic assessment of learning strengths and weaknesses in a work setting; provide baseline data about readiness to profit from training or other learning experiences; and to increase an individual's awareness of strategic learning strengths and weaknesses. The *attitude toward training* scale (∝ = .80) indicated the value or importance individuals placed on participation in training for personal or professional development (e.g., "I enjoy training programs that help me to develop knowledge and skills that will be useful in my work"). The *motivation to participate in training* (∝ = .68) scale examined the degree to which individual's are willing to participate in training and complete the tasks and work assigned to him/her (e.g., "I try hard not to miss any of the sessions during a training program").

Control Measures

Since the primary interest of this study was in identifying the variance in amount of voluntary training participation accounted for by the predictor sets independent of job group and previous mandated training, these variables were always entered first in the regression equations.

Job Group. Five different job groups were included in this study: mobile equipment operator, highway foreman, engineering technician (entry level), engineering technician (advanced), and highway maintenance specialist/superintendent. Job group data came from organizational records.

Previous Mandated Training Attended. The focus of this study was on identifying factors associated with voluntary participation in training. Because the amount of mandated training individuals were required to attend was presumed to limit the time available for voluntary training, time spent in mandated training was controlled. This factor was measured by a single self-report item that asked employees to indicate how many mandated training courses they had participated in over the past 12 months. Response categories ranged from 1 (zero) to 7 (six or more).

Outcome Measures

Two outcome measures were used in this study. The objective measure of participation in training included the total number of organization-sponsored training events that participants attended in the 12 months between January 1, 1998 and December 31, 1999. Data for courses attended by each respondent were generated from the organization's training database. A single-item self-report measure asked respondents to estimate the number of days of voluntary job-related training they intended to complete in the next 12 months ("How many days of job-related training do you intend to complete in the next 12 months, assuming the courses are available and the decision to attend is left completely up to you?). Respondents were given a blank space on the questionnaire and asked to make their best estimate.

Results

Individual employees were the unit of analysis in this study. To assure a consistent sample across the analyses, observations with missing data were deleted. This reduced the regression sample size to 569 complete observations.

Descriptive Statistics. Means, standard deviations and intercorrelations of all variables included in the study are shown in Table 2. Data indicated that proficient levels of reading and math skills were positively associated with courses attended ($r = .13$ & $.16$, $p \leq .05$) and intentions to participate in training ($r = .16$ & $.18$, $p \leq .05$) but not with participation in mandated training. Job group showed no association with courses attended but was negatively associated with intentions to participate ($r = -.15$ & $-.32$, $p \leq .05$), suggesting employees in job requiring relatively higher levels of basic skills intended to participate in less training than lower level employees. Respondents' scores across the five motivation to improve work through learning scales were moderately high ($M = 3.0 - 3.8$), but there was no consistent significant relationship between these variables and either measure of training participation. Courses attended was moderately associated with intentions to participate ($r = .14$, $p < .01$). Mandated training attended was significantly associated with both courses ($r = .36$, $p \leq .05$) and intentions ($r = .13$, $p \leq .05$). The positive correlation between mandated training attended and intentions is surprising because it was expected that increased time spent in required training would leave less time for voluntary training.

Table 2
Means, Standard Deviations, and Intercorrelations

Variable	N	$\bar{x}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1Courses	743	9.1	7.9	--													
2Intend	743	12.2	14.7	.14*	--												
3Mandated	732	4.7	2.1	.36*	.13*	--											
4Group	724	--	--	-.04	-.32*	.11*	--										
5Culture	682	3.5	.60	.04	-.06	.10*	.00	--									
6Staff	718	3.6	.71	.08*	.05	.03	-.17*	.18*	--								
7Reading	723	--	--	.13*	.16*	-.02	-.40*	-.15*	.18*	--							
8Math	723	--	--	.16*	.18*	-.05	-.55*	-.10*	.22*	.74*	--						
9Improve	720	3.7	.55	.03	.06	.04	.03	.26*	.15*	.05	.03	--					
10Motpart	713	3.8	.49	.17*	.06	.16*	-.02	.19*	.21*	.19*	.17*	.23*	--				
11Mottran	711	3.7	.66	.10*	.07	.14*	.05	.43*	.13*	-.04	-.02	.32*	.34*	--			
12POE	723	3.0	.80	.05	-.02	.05	.01	.64*	.20*	-.11*	.10*	.27*	.14*	.47*	--		
13TEPE	723	3.7	.61	.06	.04	.10*	.03	.50*	.20*	-.04	-.02	.45*	.32*	.61*	.56*	--	
14Attlrng	716	3.7	.63	.08*	.11*	.08*	.02	.32*	.21*	.11*	.08*	.48*	.51*	.55*	.35*	.56*	--

* $p \leq .05$

Regression Results. Table 3 presents the hierarchical results for the total and unique effects of the predictor sets for both outcome variables. The combined predictor sets accounted for a significant proportion of the variance in both the objective measure of training attended in the past year ($R^2 = .19$) and self-reported intention to attend training in the future ($R^2 = .17$).

Table 3
Hierarchical Regression Results for Total and Unique Effects

					R^2 total[a]		R^2 unique[b]	
	N	R^2	Control[c]	A + M[d]	Control + A	Control + M	A	M
Courses	564	.19*	.15*	.04*	.18*	.16*	.01	.02*
Intend	564	.17*	.14*	.03*	.15*	.16*	.02*	.01

* $p \leq .05$

[a] Effects of other variable sets uncontrolled

[b] Effects of other variable sets controlled

[c] Control variables (job group and mandated training attended in the previous 12 months)

[d] Antecedents (continuous learning culture, staffing strategy, adequate/inadequate job-referenced reading and math proficiency) and mediators (perceived need to improve, transfer effort- performance expectations, performance-outcomes expectations, motivation to transfer, motivation to train, and attitudes toward training)

Model Evaluation. Hierarchical regression analysis was also used to determine whether the model provided a reasonable description of the relations among variables as specified. Because the focus of this study was on predictors of training participation independent of mandated training attended and job group, these factors were always entered first in the regression models. An analytic procedure suggested by Cohen & Cohen (1983) was used to test the relationships suggested by the model. This analysis contrasted total effects, or the direct and independent proportion of variance accounted for by each predictor set, with unique effects, or the proportion of variance accounted for by the predictor set when the other sets were controlled. Direct relationships suggested by the model should produce significant total and unique effects. This would indicate that variance was not shared among predictors and therefore could not be mediated. Mediated relationships should show significant total effects but non-significant unique effects.

The effects of perceived need to improve and motivation to improve work through learning were hypothesized to mediate the influence of workplace literacy skills, continuous learning culture and perceptions of staffing strategy on actual training attended in the past year and intentions to participate in training in the future. Examination of the total and unique effects of antecedent and mediator variables provided mixed support for the model. After controlling for job group and mandated training attended, basic skill levels, perceptions of continuous learning culture and staffing policy had a significant total effect on intentions to participate in training and on courses attended. Comparison of the total and unique effects indicated the antecedents did not account for any unique variance in courses attended. Thus for this outcome variable it appears the effect of the antecedent measures was mediated by the motivational elements (perceived need to improve & motivation to improve work through learning factors) as hypothesized. However, the mediated relationship did not hold for self-reported intentions to participate in training.

Although the mediated model was not supported for both criterion measures, the predictor sets explained significant variance in both measures of training participation. Analysis indicated that control variables (job group and mandated training attended) accounted for .14 and .15 ($p < .05$) of the variance in courses attended and intentions to participate respectively. The regression models that included control and antecedent variables indicated the latter explained significant variance in both courses attended ($R^2 = .18$, $p < .05$) and intentions to participate ($R^2 = .15$, $p < .05$). Examination of the regression models that included only control variables and motivational elements also indicated that these variables accounted for significant variance in intentions to participate for both outcome measures ($R^2 = .16$, $p < .05$). Data show that antecedents and mediators added comparatively little to the variance explained in the outcome measures ($R^2 = .04$ & $.03$) beyond that accounted for by the control variables.

Examination of Beta weights (Table 4) in the unique effects equations indicated which variables accounted for significant variance in the training participation measures. Number of mandated courses attended was the only factor to have significant total and unique weights for both outcome measures, suggesting a direct relationship with courses attended and intentions to participate. Results indicate math level had a direct significant relationship with courses attended and job group made a significant negative contribution to intentions to participate. Significant unique contributions to both outcome measures were made by motivation to improve work through learning variables, specifically, motivation to transfer, transfer effort-performance expectations, and attitudes toward training. This implies these factors make a meaningful contribution to training participation.

Table 4
Beta Weights for Total and Unique Regression Models

	Group	Mandate	Culture	Staff	Math	Read	Improve	Motpart	Mottran	POE	TEPE	Attlrng
Course	.01	.38*	-03	.05	.20*	-.06	.01	.05	.10*	.04	-.09	.00
	(.03)	(.38*)	(-.04)	(.06)	(.20*)	(.02)	(.04)	(.03)	(.10*)	(.00)	(.09*)	(.13*)
Intend	-.45*	19*	-.10	.00	.02	-.11	-.02	-.06	.06	-.06	.03	.14*
	(-.41*)	(.18*)	-.09	(-.02)	(.00)	(-.10)	(.04)	(.03)	(.10*)	(.00)	(.09*)	(.13*)

Note: Table displays the Beta weights for the predictor variables. Beta weights for total effects appear on top and those for unique effects below in parentheses.
* $p \leq .05$

Conclusions and Discussion

Several important findings emerged in this study that contribute to the understanding of training participation. First, the study suggests that employees who meet the basic skill requirements of their jobs participate in more training and intend to participate in more training than do employees who do not meet the basic skill requirements.

Satisfactory math skill levels made a significant positive contribution to courses attended and both satisfactory math and reading levels were positively associated with courses attended and amount of intended participation. These findings suggest that adequate job-related workplace literacy skills are important prerequisites for employee participation in training activities and that employees who meet the workplace literacy requirements of their jobs are apt to participate in more training than do employees who do not. On the other hand, it is interesting to note that large negative correlations emerged between reading and math skills and job group ($r = -.40$ & $-.55$, $p \leq .05$). These date indicate employees in jobs that required relatively higher basic skill levels were less likely to meet the required proficiency level. Job group was also negatively associated with intentions to participate in training. Taken together, these data suggest employees in job requiring basic skills beyond current ability levels may intentionally avoid participation in training. Future research should confirm and examine these relationships in more detail. Specifically, research is needed to examine the interaction between job level, basic skills proficiency and training participation and whether changes in literacy levels are associated with changes in training participation rates. Research should also address whether employees with satisfactory workplace literacy levels are more aware of their development needs than employees with unsatisfactory levels and the extent to which workplace literacy levels affects participation in other types of development activities (e.g., career assessment and planning).

Second, the results did not support the proposed model across both dependent variables. Although motivational elements emerged as significant mediators for courses attended, they did not for intentions to participate. Also, the control variables explained a substantially larger proportion of the variance in outcome measures than did antecedents and mediators combined. It is unclear whether these results are sample-specific or due to some other factor. On one hand, it is also possible that other unexamined factors were at work. For example, the findings could indicate that intentions to participate in future training participation are influenced by different factors than past training participation. Intentions to participate may be contingent on an individual's perception that training will enhance adaptability to work demand or anticipated job changes, or will contribute to career advancement. Past training participation, on the other hand, may be more contingent on perceptions of organizational support for training and its application (Kozlowski & Farr, 1988; Noe et al., 1993). It is also possible that employees in this study did not distinguish between mandated and voluntary training participation. Subjects in this study were relatively low-level public sector employees who were not typically encouraged to make voluntary requests for training. Although employees in this organization could voluntarily elect to attend training, training was a primary requirement for advancement. This may have generated the view among employees that training was largely mandatory. As a result, the study may have in effect attempted to predict voluntary training participation using measures that reflected mandated training. Future research should test this model with a different population of employees in settings where voluntary participation in training and development activities is emphasized. Longitudinally designed studies would add to our understanding of future development intentions and actual future participation.

Third, significant unique contributions to both outcome measures were made by motivation to improve work through learning variables, indicating these factors make a meaningful contribution to training participation. This is important to the extent it suggests this factor is an important precondition for training participation. Further work is needed to more fully understand the role of this construct in employee development. Research is needed to confirm its role as a mediator in training/employee development activities and identify what individual characteristics, training-related factors, and work environment features contribute to this factor in the context of employee development.

Finally, a number of constructs suggested by previous researchers as potentially important predictors of development activity did not emerge as such in this study. Continuous learning climate (Tracey et al., 1995) was not significantly associated with either measure of training participation, although it did exhibit strong positive correlations with the motivation to improve work through learning scales. Organizational staffing policy (Sonnenfield & Perperl, 1988) was weakly associated with courses attended and was not a predictor of either courses attended or intentions to participate. This latter finding was somewhat unexpected given that the public sector organization in which this study took place had an explicit policy encouraging internal promotions based in part on completion of training. Future research should reexamine the role of these variables in predicting voluntary training participation as well as other kinds of employee development activity.

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'Personal development-I'm not really interested!': Perceptions on Barriers to Learning for Mid-Career, Middle Level Managers in the Scottish Life Assurance Industry

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The paper discusses literature relating to potential barriers to learning for all managers, and then concentrates on the position of middle level mid-career managers in more detail. For example, flatter organisational structures, and changes to the traditional 'psychological contract' (Hiltrop 1996) can affect participation in learning, training and development activities. Empirical evidence from a qualitative study of mid-career managers in five life assurance institutions in Scotland is presented.

Keywords: Barriers to Learning, Middle Management, Life Assurance

All sectors within the Financial Services Industry have undergone significant and extensive transitions throughout the 1990's (Park, 1999). Changes relating to increasing globalisation, competition, demutualisation, technological advances and merger and acquisition activity have intensely affected the nature of the insurance sector, with life assurance in particular continuing to be characterised by extreme volatility (Matthews, 1998; Genetay, 1999; Murray, 1999; BBC, 1999). Flatter organisational structures and shifts in the traditional 'psychological contract', which are felt to be responses directly attributable to upheavals occurring at the macro level, are characteristics of many organisations (Beer et al., 1984; Hiltrop, 1996). An important consequence of these developments is that managers can no longer rely on the job security which was once associated with the industry. Major downsizing and the threat of redundancies are present even amongst the most successful of companies (Cressey and Scott, 1992; Gall, 1993; Storey, 1995; Antonacopolou, 1999; *The Scotsman* 6 February 1996). Given this background, a central assumption made in this paper is that shifts occurring at the environmental level will influence managers' participation in effective learning and development activities. However the decision to participate and complete training is an individual choice, which will be influenced by individual perceptions of barriers to learning. It is therefore necessary to examine barriers to learning from this perspective to build a greater understanding of learning in organisations.

Effective learning and development is felt to be a fundamental condition for organisations and individuals aiming to build a sustainable future (Garratt, 1960; Salaman & Butler 1990; Senge, 1990; Nonaka, 1994). This paper reports on findings from a study which focused on managers in the Scottish life assurance sector occupying mid-career middle level managerial positions. The mid-career manager has been defined by Maguire & Fuller (1995) as, "*Someone who is in their mid-thirties and forties who, having attained some experience in managerial jobs, is looking to progress or at least consolidate their careers.*" The role of middle management has been described by Floyd and Wooldrigde (1997: 465) as "*performing a co-ordinating role where they mediate, negotiate, and interpret connections between the organization's institutional (strategic) and technical (operational) levels.* The core aim of this study is to contribute and build upon existing literature which explores managerial participation in learning by empirically investigating the perceptions and experiences of middle level, mid-career managers in the financial services sector in Scotland.

Before the actual findings from this study are presented, environmental factors, which influence managerial learning, are presented. Secondly, a discussion on the barriers to learning is undertaken (Temporal and Boydell, 1981; Stuart, 1984; Mumford, 1988). Finally the impact of organisational change on the role and position of middle level, mid-career managers is presented.

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Management Learning Environment

Antonacopolou (1998) examines management development and learning at societal, industrial, organisational and individual levels. Her model provides a holistic view of where learning takes place moving from the individual learner through to society in general, identifying the interdependent nature of the various levels. Allied to Antonacopolou's framework, is the model which deals with the different actors within various levels of training provided by Mabey, Salaman and Storey's (1998) 'Strategic training and development: a stakeholder approach' illustrates the factors which can influence how individuals learn in organisations.

These frameworks highlight the complexity and interdependency of a range of internal and external influences on learning. The purpose of this paper is to build an understanding on barriers to individual learning through the presentation of data focusing on both intrinsic and extrinsic blocks to managerial learning.

In this study, the learning activities which are investigated relate to activities which theoretically further a managers skills and competences in their professional or vocational life. Factors which impact on managerial participation in such activities are analysed by Temporal and Boydell (1981) and Marsick and Watkins (1990), who deal with the issue of managerial learning and development in the organisational context. Temporal and Boydell (1981) explore the nature of managerial learning behaviour, the factors that help or impede managers in the development of general learning and the effect that the general learning climate within the organisation has on the development of the individual. Temporal and Boydell (1981) have formed the 'Organisational Model of a Management Learning System', comprising four interrelated constituents influencing the process.

The first component relates to both the formal learning structures in the organisation within which managers have to operate, such as job descriptions, and to the externally set management development and training objectives. The second is concerned with everyday working relationships as well as the more specific opportunities which can offer developmental prospects for the manager, such as internal and external training and development courses. Thirdly, the qualities of the individual learner are considered. The intellectual and cognitive ability which the individual has for new learning, is viewed as vital to overall development. Temporal and Boydell (1981) also propose that the learning climate plays a significant role in determining the extent to which learning and development is effective in the organisation. Essentially, this aspect relates to the company culture which they define as 'those elements within the managers' environment which encourage or discourage learning or desirable behaviour' (Temporal and Boydell, 1981:2).

The work of Marsick and Watkins (1990: 7) closely mirrors many of the key aspects of the learning system described above. In their assessment, employees in organisations can experience three different types of learning: the more formal type which may have been traditionally delivered in the classroom; informal learning which occurs through a manager's day-to-day interactions, and lastly incidental learning which is described as a *"by-product of some other activity such as a task accomplishment, interpersonal interaction, sensing the organisational culture or trial and error experimentation"*.

Other observers such as Thomas and Al-Maskati (1997) and Antonacopolou (1998) stress the importance of the specific organisational context. Temporal and Boydell (1981) underline the fact that the four components are inherently interconnected and ultimately determine the efficacy of such learning for individual managers. For example, an organisation could provide excellent opportunities for learning and development but these may be irrelevant unless the individual either has the capacity to understand what is being taught or opportunities to use the skills engendered through such development.

Barriers to Learning

Temporal and Boydell (1981) categorise a full range of barriers or blocks to learning that may be encountered by these managers. These are separated into intrinsic factors, which are described as being 'owned by' the learner, and extrinsic or external factors, which are consequences of environmental forces and pressures. From these two major headings, Mumford (1988) has developed a classification of ten categories. Table 1. illustrates the range of potential managerial barriers to learning.

Table 1

Barriers to Learning for Managers

Nature of Block/barrier	Clarification
Intrinsic	
Perceptual	Not seeing there is a problem
Cultural	The way things are here
Emotional	Fear or insecurity
Motivational	Unwillingness to take risk
Cognitive	Previous learning experience
Intellectual	Limited learning styles / Poor learning skills
Expressive	Poor communication skills
Extrinsic	
Situational	Lack of Opportunities
Physical	Place, time
Specific environment	Boss/colleagues un-supportive

Source: Adapted form Mumford (1988: 26)

The first seven of these barriers are closely aligned to the intrinsic factors as defined by Temporal and Boydell (1981). For example, perceptual barriers to learning may exist where managers do not perceive there to be any requirement for further development due to their apathetic attitude regarding current position or future career security. Another example of an intrinsic factor is the emotional barriers to learning. Mumford (1988) proposes that these are linked to fear or insecurity which may inhibit participation in further development activities. The final three learning barriers are linked to the extrinsic environment. These may be either linked to the physical aspects of the manager's work location or to the attitudes of senior managers or colleagues towards mid-career managers' participation in development activities.

By categorising the comments and observations of the managers, we can begin to assess the impact of each barrier and expose the interrelationships between these elements. At this point, it is necessary to understand the differences between the two groupings. It is felt that intrinsic barriers are 'owned by' the learner and these are therefore perceptions over which they have control. On the other hand, extrinsic or environmental barriers are out-with the locus of their individual control. In this way, it follows that the variables that are present in relation to the intrinsic values lead to diverse perceptions on the extrinsic. For example, the perceptions, motivations and emotions of one manager from another may dictate a different response to a physical or situational barrier according to his or her locus of control.

In order to clarify these extrinsic factors it is necessary to understand current changes in organisations that are impinging upon the role and position of middle level, mid-career managers in the financial services sector of the Scottish economy.

Organisational Change

Much of the literature on recent organisational change describes an increasingly insecure position for middle managers in modern organisations (Dopson and Stewart, 1993). Fenton O'Creevey and Nicholson (1994) point out that when organisations implement rationalisation programmes there are many perceived negative implications for those in middle management positions. These are associated with issues of future job security, career prospects, and the nature of the work for those who are survivors of corporate downsizing and redundancy programmes. The obvious implication of delayering on learning and development is that, with fewer middle managers around, there will be increasing work pressure on those who do remain in flatter organisations, which may hinder their continued participation. Therefore time becomes a major constraint for further development. Pessimism surrounding those in mid-career and middle level management may induce a varied set of factors which inhibit participation in learning activities. For example, middle level managers who perceive there to be a threat to their positions may contend that it is pointless participating when it appears to provide little security to former colleagues.

Associated with the development of flatter organisational hierarchies is what is described as the early career plateau. If this is a feature in organisations the manager may only have the option of lateral moves in the organisation's hierarchy for renewed interest and challenge (Evans and Gilbert, 1984; Nicholson, 1993). Given this background, embarking on new learning opportunities may appear to be futile to middle managers faced with such a scenario and may lead to them looking for other avenues in life outside work for challenge and stimulation.

The emergence of a 'new deal' between employers and their managerial employees is another aspect of organisational change, which has been the focus of recent studies (Kerfoot & Knights, 1993; Stiles et al., 1997; Knights & McCabe, 1998). These 'new deals' have, in effect, amounted to a re-negotiation of the traditional 'psychological contract' (a phrase first coined by Argyris in the 1960s). In the past organisations (especially in the life assurance sector) offered contracts that were paternalistic in nature, where loyalty and commitment generated security, regular promotions, the provision of high quality training and development and salary increases. Recent changes include the use of more temporary and agency staff as well as the provision of more short and fixed term contracts for employees in financial services organisations. This has resulted in a reciprocal and 'what's in it for me' attitude amongst employees influencing the employment relationship. (Herriott et al., 1996; Hendry and Jenkins, 1997; Hayes and Hudson, 1995; IRS Employment Trends, 1997)

When specifically considering training and development provision as part of the psychological contract, Stiles et al. (1997) argue that managers attach significant emphasis on what development opportunities they are offered, viewing these as symbolic of how the organisation views their future career prospects. Hence, in the past, training and development was seen to be employer led and was designed to prepare employees for a career within the organisation. However, as careers have been redefined, Stiles et al. (1997) have found that emphasis on training and development in the new psychological contract has been realigned towards providing employees with skills which promote their overall employability. In addition, more emphasis has become attached to individuals taking a greater responsibility for their own development.

What effect do these changes in the psychological contract have in relation to participation in learning for middle level mid-career managers? Again Stiles et al. (1997) make the important point that, in the organisations that they studied, there were apparent differences between the philosophy and the practice of these new psychological contracts where the intended aim of these 'new deals' was to encourage benefits like increased flexibility for employees in the external labour market. However it would seem, in reality, that changes in the psychological contract, allied with other changes in the employment relationship, have produced more frustration amongst employees. Many of these issues are revisited when the findings are discussed in more detail.

Research Methodology and Data Collection

This research used a qualitative mode of inquiry. In order to explore barriers to learning, middle level mid-career managers from five of the largest life assurers boasting a Scottish head office data was collected using depth interviews. There are several reasons why such a qualitative methodological approach is taken. The most important of these relates to the contextual environment where the research is to be carried out. The issue of control over the actions of the units of analysis that are being investigated is of importance here. As Yin (1994) points out, the researcher needs to be aware of the influence which he or she has over the study subjects, and how this may impact on the findings. The major advantage in using qualitative semi-structured interviews with middle level, mid-career managers, (68 in total and an average of 13.5 per organisation) was to allow the interviewees to discuss using their own terms and expressions, their attitudes, motivations and perceptions of the world. It was accepted that the individual manager's perceptions would be influenced by the social constructs of both the organisation and wider environment. The main aim was to allow the study to remain open and holistic to achieve an understanding of the interplay between the individual managers' perceptions and the wider environment.

In terms of the practicalities of the data collection, in selecting managers for interview attempts were made to ensure that all the main functional areas in typical life assurance organisations were represented, i.e. Administration/Pensions, Investment, Information Systems, Marketing, Actuarial, Compliance and Personnel/Human Resource Management. In order to capture an organisational perspective and a contextual overview of Training and Development strategies in each of the organisations, managers who were responsible for Training and Development were also interviewed. As this paper is primarily considering the individuals perceptions of barriers to learning the findings from these interviews are not discussed.

In the interviews conducted with middle level mid-career managers the questions covered a wide range of issues. The first section which concentrated on personal experiences and perceptions of learning, consisted of gauging the managers comments on issues such as their reasons for undertaking certain learning activities; their preferred methods of learning; the factors that had inhibited them in the past; how they felt their career could develop in the future, and their perceptions of how management training and development could influence this. In the second section, the focus shifted to the most important pressures which the managers thought were taking place in the external environment, and how these might affect the training and development culture in their organisations.

For reasons of confidentiality neither the name of the organisation nor the manager who forwarded the information is given. Instead, pseudonyms which are based on Scottish geographical regions are employed to conceal the organisations' identity (Central Life, Lothian Life, Highland Life, Grampian Life and Borders Life). However the gender, job title and age of the participants are supplied to help provide a context for the reader.

Empirical Findings

In this section examples from the actual transcripts have been isolated to illustrate the experiences regarding the various barriers to learning. Firstly, barriers which are linked to the managers intrinsic attitudes, motivations and perceptions are presented. For example, their previous experiences of learning activities or their perceived need for future participation in learning activities. Secondly, those barriers related to the organisation or other environmental forces are addressed.

Perceptual Barriers to Learning

In Mumfords (1988) analysis a perceptual barrier is felt to occur when the 'individual does not see that there is a problem' in relation to participating in potential learning activities. Many of the managers felt that they were professionally successful and often did not see any 'problems' in their work (related to what they personally could do) which participating in learning activities would change. The following examples illustrate this:

"*I've probably been around for so long here that I feel I know enough thank you very much*".... , . Female, Life Customer Services Manager, Age 47: Central Life.

"*I'm maybe getting close to that point where I'm quite happy here... So in terms of my personal development, I'm not really interested.*" Male, IS Technical Manager, Age 36: Central Life.

An interesting aspect related to this is that some interviewees expressed a preference to concentrate on their work in the shorter term. Development and learning activities were something in which they were not interested.

"Some people that have done MBAs do appeared to have advanced but *I'm not interested in gaining academically in that way.* I'd rather concentrate on *improving myself for the job or similar jobs...*". Male, Assistant Marketing Manager, Age, 45: Highland Life.

Cultural Barriers to Learning

Mumford (1988) describes cultural barriers to learning as when a manager is constrained from engaging in learning activities because of 'the way things are here'. Such intrinsic barriers may originate as a result of exposure to the culture of the workplace and domestic life. Often, concerns over the time spent with one's family appears to take precedence over continued learning and development, particularly when considerable effort is needed to achieve the required levels of motivation to complete useful learning. One quote from a manager illustrates the problems associated to this:

"*An MBA crossed my mind but,......with 3 young children, I'm not convinced how much time I would be able to devote,...*" (Male Pensions Manager aged 38 - Lothian Life)

A number of managers mentioned that they tended to be quite conservative. This trait is something that is often associated with the financial services industry and the Scottish life assurance sector particularly, which has a reputation of being built on prudence. Therefore it was not surprising that some of the managers appeared to express such tendencies when it came to learning and development activities. For example several managers across the organisations described themselves and their organisations as being 'conservative'.

Emotional Barriers to Learning

Emotional barriers to learning are associated with individual insecurities, which may cause reluctance to take action in certain areas and hence hamper participation. Some managers clearly exhibited certain emotional barriers.

For example, uncertainty and insecurity about their organisational positions. This point is particularly relevant when considering issues concerned with organisational change. One female manager described her expectation that the issue of early retirement would arise before she reached statutory retirement age.
"I *still envisage that there will be a time, long before I reach retirement age, where they'll say you're on early retirement or there isn't actually a job for you anymore*". Female, Process Improvement Manager, Age 46: Highland Life.

Some managers were pragmatic in assessing their chances of potential success in terms of learning activities at the present time (particularly formal learning and development). A common response was their perception that certain learning activities were risky, given the pressures that already exist in their jobs and the very real possibility of failure.
"*From a personal level, I like to lead a full life and I was looking with a view to do the part time/weekend MBA course and I realised there wasn't enough hours - I'm certainly more motivated to study, but I wouldn't ..set myself up for a fall, ... I would want to fully commit myself and give it a good shot and I don't think I would be inclined to start something...only to fall at an early hurdle. That would de-motivate me.*" Male, Process Support Manager, Age 35: Borders Life

Another related reason was how far one could go before reaching a level of incompetence.
"*I'm realising that I'm reaching my limits.... I'm close to my limits and I don't really want to go to a point where I'm not doing the job very well or I'm having to say, well I don't really want to do that.*" Female, Process Improvement Manager, Age 46: Highland Life.

Motivational Barriers to Learning

Motivational barriers to learning were felt to arise for managers who were unwilling to take risks to participate, or who were simply not interested in further learning. As can be seen from the literature, these concepts of risk, uncertainty and insecurity in the workplace are very real concerns for mid-career managers in financial services. It was therefore not surprising for managers to forward opinions questioning the real benefits of participation in learning activities.
"*I suppose your motivation to do it really, I suppose to be convinced that it was worthwhile, whatever worthwhile might mean... I don't suppose we have had a tremendous opportunity to become involved in anything much.*" (Manager aged 39 Lothian Life Compliance Male)
"*One of the reasons I stopped was ...because the job I'm doing just now is fairly busy and pressurised and everything at work is changing. I feel that the return on investment is probably not there, for where I am career wise.... I think it does no harm, but I'm not convinced that it's a great thing.*" Male, Project Manager, Age 41: Highland Life.

For some the predominant feeling was that it was more beneficial to place emphasis on their actual jobs and core tasks. If we consider that, for some of the interviewees and especially those who are qualified Actuaries, Accountants and Insurance Officials (Association of Chartered Insurance Institute), it may have taken five or six years to become qualified, it is perhaps not surprising that the thought of more formal qualifications was prohibitive. The following comments explicitly illustrate this:
"*I've done the actuarial qualifications.., where there was an intense amount of study. Since then.....I really have no plans to do any more exams.*" Male, Client Services Manager, Age 44: Grampian Life.

Cognitive Barriers to Learning

The previous learning experiences were considered to be an important source of potential blocks. What can be ascertained from previous experiences and perceptions of learning was whether these affected decisions regarding further study. Some managers felt that they had not exactly enjoyed their previous experiences at school or university.
"*I was shocked quite frankly when I got to University and it was so poor - you know I was expecting something much better than I had experienced at school - I was disappointed I think.*"
and
"*I did also go to ..evening University classes in management development and that was 'rueful' - ...what you are really looking for I think is practical -... hints, tips and real life examples and really the benefits of other peoples real experience of dealing with people.*" (Female Compliance Manager aged 43: Lothian Life)

Environmental Extrinsic Barriers to Learning

As has been previously mentioned, these are particularly turbulent times for the financial services sector in the UK. Considering this contextual background it is not surprising that those barriers connected to the wider environment, beyond the direct control of the individual learner will impact on participation. Evidence was found that the managers felt that elements of all three extrinsic barriers greatly affected where, what and how they participated in learning activities.

A significant theme relating to travelling to, and location of development opportunities emerged. Many of the managers expressed concern about inadequate provision of courses, seminars and conferences, in the Scottish geographical area. The criticism that 'London or the South', and increasingly abroad, would normally be chosen to host relevant events was also made. As a result of this many felt they would be less likely to participate in such events. One manager summed up the situation quite graphically when he pointed out that:

" *I have a problem in that these things(I.T.conferences) hardly ever happen in Scotland .....I do feel that Scotland is treated as a kind of backwater.*" Male, IT Customer Services Centre Manager, Age 47: Grampian Life.

As well as feelings regarding the actual location of the learning activities several managers also brought up the issue of participation and reward in this context. It would seem reasonable to suggest that, in order to encourage participation in renewed learning and development activities, benefits or rewards would require to be in place. Given the level of uncertainty which surrounds this industry at present, it would be expected that the rewards would be linked to providing some security in the future.

It was also apparent that a number of managers across organisations had problems in interpreting the organisational value of certain vocational qualifications and development activities.

"*An MBA crossed my mind but, ... there's no evidence that the company treats this in a particular way, you might think, for someone with an MBA and someone without one, that should be the first point. There's no guidelines or feedback from management or personnel that it is something they recommend.*" Male, Pensions Manager, Age 38: Lothian Life.

The issue of time and space for pursuing and completing learning activities has arisen. In responses across all the organisations the vast majority of managers singled out severe time constraints as the most biggest perceived constraint to participation. Managers summed up the problem that exists for them as a result of these time pressures as follows:-

"*I'm learning but I'm not learning as much as I could, I'm bogged down in admin. and paperwork quite a lot of the time that is preventing me from developing in other areas.*"(Manager aged 38: Pensions Manager: male)

"Now though the barrier to learning and further learning is without doubt the office activity - I'm busier now than ever before and there's no sign that that's going to diminish... More is expected now than ever before, workforces are generally are leaner and fitter and all that means is that they are turning more stuff out with fewer people... So that is the barrier now but that's life...." (Manager aged 40: All Lothian Life)

As well as these physical pressures, which proved to be a common feature of contemporary managerial careers, the obligation to work long and demanding hours as a result of the current economic climate was felt by many managers.

"..certainly on the level, one or two down from the top, the management level if you like there's probably a fairly intense pressure for most people...and getting worse." Male. Project Manager, Age 41: Highland Life.

The above statements clearly highlight the pressures simply to survive, which in turn impact on undertaking any new learning and development activities. The specific environment of the organisation does play an important role in determining participation in learning activities. These are integrally associated with the support that managers receive for learning. In this study an attempt was made to understand the organisation culture in relation to learning and development. The prevailing issue to emerge was that top level do not take learning and development seriously enough. Phrases like 'lip-service' constantly arose when senior managers and training and development were mentioned together.

> *"They're making a positive attempt to encourage management development.... The difficulty with all management courses is applying it when you get back in. Four or five of us at my level went to a strategic management course - it's fascinating, very interesting and relevant and it's very obvious who should be doing it but it's not a priority as far as senior management is concerned." (Manager aged 46)*

In general what can be observed from the findings is that there are very real barriers to learning. However, emphasis is given by all managers to extrinsic factors, which appear to be caused by the turbulent external environment. In effect the main finding in this study would suggest that as a result of the increasingly uncertain environment in which these managers work many of the intrinsic barriers and blocks to learning are amplified to the point where the manager is severely constrained to undertake any kind of activity which has a longer term development perspective.

Conclusions

Elements of all the barriers, identified in Table 1 were in evidence, however less emphasis was found on intellectual and expressive barriers to learning. These factors are associated more with learning process, rather than participation and are therefore out with the scope of this paper.

Although, classification of barriers to learning is useful for providing a structure to explore the subject matter, a significant proportion of respondents experienced multiple learning barriers. The initial analysis of the data has highlighted the critical influence of the extrinsic barriers to learning. However in order to gain a better understanding of the locus of these multiple barriers, the next stage of the research will be to integrate Mumford's (1988) classification with Mabey, Salaman and Storey's (1998) Stakeholder Approach to provide a three dimensional perspective of learning barriers. The intention is to interpret which barriers are most relevant at which levels of learning. Initial superficial analysis shows that:

1. At the societal level, as an adult learner the middle manager must deal with family responsibilities and non-work interests, and therefore there are physical and situational barriers to consider.
2. At the industry/sector level, there are pressures relating to the managers' position and job security, due to the sector changes and pressures.
3. At the organisational level, specific examples are seen in relation to support by department and colleagues. Unfavourable / un-supportive culture and political environment in the organisation, were also cited as learning barriers.
4. At the individual level there were personal/ intrinsic pressures in the themes of emotions, perceptions and motivations which were presented as barriers.

These initial findings highlight the fact that barriers exist at all levels, reinforcing the interdependent hierarchical nature of learning barriers. This in turn has implications affecting the choice and content of interventions used by organisations to encourage and harness management learning.

It may be necessary to explore ways in which the organisation can support managers participating in learning. Individuals with an internal locus of control are more inclined to be proactive in taking up opportunities, and therefore the organisational culture should be explicitly geared to improving the perceived locus of control. Crowder and Pupynin (1993), using Rotter's (1966) definition, propose that 'individuals with an internal locus of control believe performance to be contingent on their own behaviour while individuals with an external locus of control believe that outcomes are beyond their personal control' Crowder and Pupynin (1993:19). However, the findings illustrated that there are managers who have reached a stage in their career where they are happy with their quality of life and are lacking in the motivation to progress any further. Learning interventions, for these individuals, needs to be predicated on an overall organisational culture which forcefully stresses the philosophy of continual change, reinforcing the message that learning is vital to organisational survival and growth.

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Lifelong Learning and Knowledge Transfer to the Workplace: A Longitudinal Case Study

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This paper explores the influence of a program of lifelong learning on knowledge transfer to the workplace in a longitudinal study of a major UK employer. Drawing on quantitative and qualitative data from a cohort of 114 participants in a company-sponsored program of continuing education, our findings indicate the kind of benefits that organizations may expect in terms of knowledge transfer to the workplace. They also provide support for proponents of "schooling" and situated learning theorists.

Keywords: Knowledge, Transfer, Workplace

Interest in company investment in human resource development (HRD) through programs of lifelong learning has rarely been higher, with governments keen to promote continuing education as a means of achieving economic objectives. As many economists, however, have argued, the notion of national interest is not always consistent with organizational interests since old style guarantees of job security and career development may be a denial of current labour market conditions (Cappelli, 1998). Instead some employers and academics have called for "new deals" that promote the idea of self-development among individuals as a means of enhancing their general transferable skills for employability in return for short term commitment and loyalty (Garavan, 1999).

These ideas of employability and general transferable skills being a source of mutual advantage for organizations and individuals are sometimes seen as little more than a convenient rhetoric for employers wishing to escape their traditional commitments to old-style psychological contracts (Herriot, Hirsh & Reilly, 1999) and may be based on a false sense of what is necessary for individual and organizational learning. On this last point, much of the newer literature on workplace learning has highlighted the importance of *situated learning* and the need to de-privilege formal, abstract knowledge which underpin the case for generic transferable skills being a source of individual and organizational advantage (Seely Brown & Duguid, 1994, Torracco, 1999). It is against such a background that we address the question of whether company-based programmes of lifelong learning through continuing education provide significant returns to the company in terms of knowledge transfer?

The contributions of this work are at least three-fold. First, we believe that the findings have some important theoretical implications, especially for the employability debate and the workplace learning literature. Second, they have implications for sceptical employers who believe that continuing education and investment in HRD benefits employees but does little to develop firm-specific skills. Third, the findings have relevance for educationalists who wish to contribute positively to the agendas of employers and governments by providing relevant continuing education (see the debate over Mode 1 and Mode 2 learning, Huff, 1999, September).

Performance Improvement, Psychological Contracts And Knowledge Transfer

The Epistemology of Knowledge Transfer

In discussing knowledge management, learning transfer and organizational learning, it is necessary to consider two alternative perspectives or epistemological orientations found in the relevant European and US

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literature (Huemer, von Krogh & Roos, 1998; von Krogh, Roos & Kleine, 1996). The first of these has been labelled *representationalism*, which is a view of knowledge that (a) represents a pre-given, universal and objective world, (b) is relatively easy transferred and, (c) can be used directly to solve problems in a somewhat detached fashion. The second is *autopoieticism*, which rejects the notion of a pre-given, objective world that, for example, can be easily represented by mapping techniques (Weick, 1994) or other such static representations (Chia, 1999), and also rejects the abstract nature and ease of transfer of knowledge. Instead, autopoietic theorists argue that organizational knowledge (a) cannot be separated from the observer but rather should be seen as something that is produced and shared among members of a community of practice (Lave & Wenger, 1991; Seely Brown & Duguid, 1994), (b) is rooted in an organization's history, and (c) demands and relies on the creation and development of a common language or *discourse of practice* among community members (Lave & Wenger, 1991)

Because our initial research aims were essentially practical and demanded a strong element of measurement in producing evidence on the outcomes of continuing education initiatives[1], initially, at least, we adopted a representationalist perspective on knowledge. During the course of the research, however, we have gradually come to the view that our approach was both limited and limiting. This recognition was, in part, a consequence of the findings of the survey data but, more important, because we found participants in our study had difficulty in identifying with the key assumptions of representationalism. These difficulties were most obvious during the interviews when respondents had problems in disentangling the relationship between individual learning and workplace learning and in separating themselves from their communities of practice as a source of innovation and improvement. Thus, to interpret some of our findings and progress the research aims further, we have also considered questions that draw on an autopoietic epistemology.

The Current Orthodoxy: Performance Improvement, Psychological Contracts and Knowledge Transfer

The current, representationalist orthodoxy on the knowledge and learning at work has been, and continues to be, heavily informed by cognitive psychology (Fox, 1997). However, the specific issue of the link between HRD and performance improvement constitutes a relatively new body of literature that has attempted to combine economic theory (e.g. human capital and sustainable resource theory), psychological theories (e.g. behaviourism and cognitive approaches) with systems models. These models have stressed the interdependence of the environment inputs-processes-outputs and feedback in positive HRD interventions (Swanson, 1999). Unifying features of this literature is its emphasis on hard and soft outcomes and on the properties of good measurement (Bates, 1999).

At the individual level, a number of attempts have been made to identify the effects of HRD interventions on hard and soft dependent variables including job competences, complex relational skills and cost reduction (Mulder, 1999). A related line of recent research is the attempt to link HRD to employee perceptions of *psychological contracts* (Guest, 1998; Martin, Pate & McGoldrick, 1999), which also incorporates work on the perceptions of organizational justice and fairness (Wooten & Cobb, 1999) and trust relations. There is neither time nor space to go into the voluminous literature on psychological contracts (for a full and up-to-date discussion, readers are referred to the special issue of the Journal of Organizational Behaviour, Volume 19, 1998). However, as Guest & Conway (1997) and Guest (1998) have argued, fairness, trust in management and the extent to which the "deal" is delivered are key components of psychological contracts and have important consequences for organizational commitment, job satisfaction, organizational citizenship, intention to stay, employee performance and, by implication, knowledge transfer.

Drawing on Guest's (1998) framework (see Figure 1), we can link his notion of "delivery of the deal" to what cognitive researchers have called the "knowledge transfer climate" (Tennant, 1999). This latter idea has allowed these researchers to take on board the influence of local context in transfer by focusing on the quality of the transfer climate, the main elements of which are:

- Manager support, including assistance and feedback
- The opportunity to use knowledge
- Peer support, including assistance and feedback
- Manager indifference or opposition
- Positive personal outcomes, including career advancement
- Negative personal outcomes, such as being overlooked for salary increases
- Group resistance to applying new forms of learning

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[1] This research is part of a wider programme of work funded by the Carnegie Trust of Scotland

Thus, by making a minor adaptation to Guest's (1998) framework of the causes, content and consequences of the psychological contract, we can treat employee perceptions of psychological contracts, including the transfer climate, as intermediate or mediating variables between investment in HRD through education and training and outcomes such as job satisfaction, organizational commitment, intention to stay and knowledge transfer for improvements and innovations (see Figure 1).

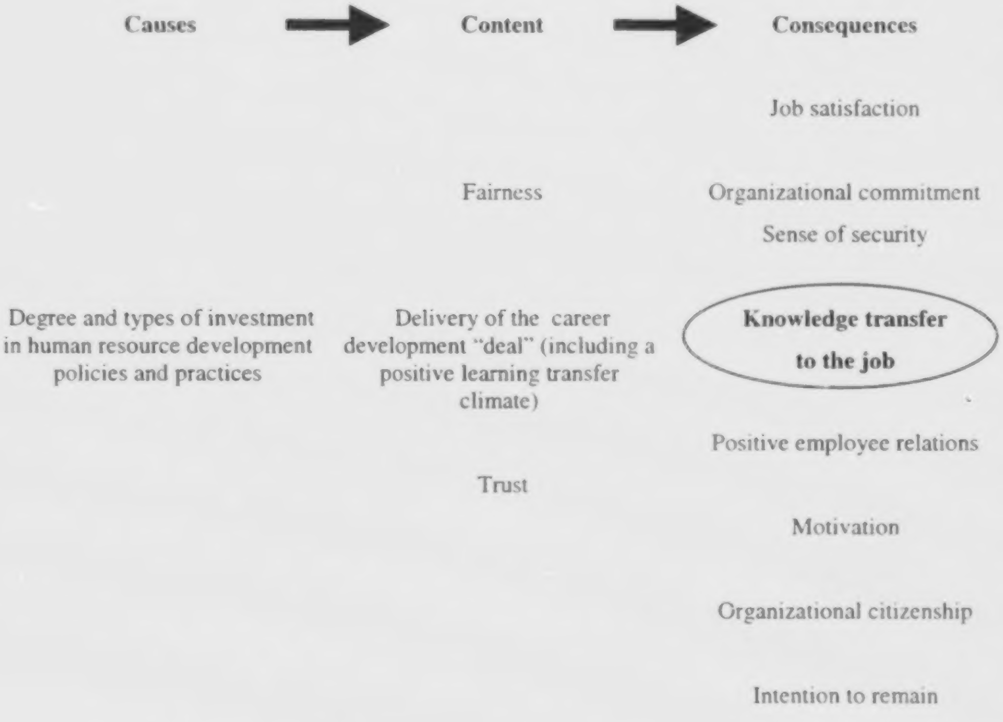
This framework poses two general lines of questioning that, among others, have theoretical and practical relevance and which we have attempted to answer in our case study.

1. Was there a pay-off to the organization in knowledge or learning transfer at the individual level? More specifically:

- *To what extent was such knowledge perceived by participants to be valuable to the company, now and in the future?*
- *To what extent did participants believe that they used formal knowledge to make improvements/innovations in their jobs?*
- *How did formal or explicit knowledge rate against other source of learning for job improvements?*

2. Was there a relationship between positive perceptions of the transfer climate and the willingness to transfer knowledge, as predicted by the "transfer climate" literature?

Figure 1: *A Framework for Understanding the Relationships between HRD investment, the content of psychological contracts and their outcomes. (adapted from Guest, D. E. (1998) Is the psychological contract worth taking seriously, Journal of Organizational Behaviour, 19, 649-664.)*


Causes
Content
Consequences
Job satisfaction
Fairness
Organizational commitment
Sense of security
Degree and types of investment in human resource development policies and practices
Delivery of the career development "deal" (including a positive learning transfer climate)
Knowledge transfer to the job
Positive employee relations
Trust
Motivation
Organizational citizenship
Intention to remain

Alternative Approaches to Learning: Situated Learning

Psychological research on the sources of knowledge and learning transfer has suggested that merely having knowledge is not enough for learning to take place and that one must learn to use knowledge in particular contexts (Singley and Anderson, 1989). Certain strands of research in this field has not been promising for educationalists, in so far as transfer from the classroom into the workplace does not seem to occur in a meaningful or significant way. As Tennant (1999), however, has argued, this conclusion may be a consequence of the rigorous and narrow definition of transfer used by a number of psychologists, which tends to stress "embrained knowledge" (Blackler, Crump & McDonald, 1998) rather than tacit (Nonaka & Tageuchi, 1995) or "encultured knowledge". Such research also excludes the role of educationalists in facilitating transfer.

One recent approach that has much to offer, both as an alternative theory and as a critique of cognitive approaches, is situated learning (Lave & Wenger, 1991).. Following from its autopoietic roots and methods of data collection, situated learning, naturally enough, has emphasised the social and practical elements of learning that occur at work outside of the classroom:

- The focus on work practice as the key to learning and on communities of (work) practice rather than practitioners
- The role of communities of practitioners in socially reproducing communities of practice through an asymmetrical "apprenticeship system" of masters and newcomers. Thus, gradually, newcomers, who engage in "legitimate peripheral participation", essentially watch and learn-by-copying skilled practitioners rather than from engaging in formal learning in detached classrooms.
- The overlapping and interdependent nature of communities of practice, in which communities depend on others for services, ideas and other resources, including new entrants.

The critique of traditional education implied by Lave & Wenger (1991) and others (e.g. Marsick & Volpe, 1999; Seely Brown & Duguid, 1994) is that classroom learning or "schooling" produces adults who *know what* rather than *know how*. Moreover, because they engage in distinctive "communities of discourse", they run the risk of becoming detached from their communities of practice. The effects of this detachment process are significant because in separating adult students and their teachers from practice, schooling effectively alienates learners, in a sociological sense, from the performative world of work. Furthermore, as researchers have stressed, since learning is a communal activity and the tacit knowledge that results from such learning resides in informal communities of practice, formal attempts to capture such knowledge through project teams and the like may be self-defeating because they ignore or overwhelm the informal sources of knowledge creation.

As Fox (1997), however, has noted, Lave and Wenger's (1991) position is not anti-schooling, but is intended to highlight the problems of traditional, formal education and to show how much of what we learn occurs during informal practice. Moreover, as we have already noted, these communities of practice rely on, and operate through, a discourse of practice that may be heavily influenced by "academic discourse", depending on the professional knowledge base and socialization of practice members. Finally, the educationalists traditional response to such criticisms of "relevance", were forcibly illustrated by March (1999, August) in his address to the Academy of Management. Adopting a similar position to critics of competence-based approaches to human resource development (e.g. Holman & Hall, 1996), he argued that education had to be detached from immediate relevance to transcend the specific, localised levels of tacit knowledge that cannot be transferred to other situations and to avoid the vested interests and "blindspots" (Weick, 1999, August) that bedevil much of what passes for practical knowledge.

This brief discussion of the situated learning literature has led us to address a further, third line of questioning among participants in the study:

3. Did formal knowledge gained through schooling (i.e."talking about practice") help them to engage more effectively in a discourse of practice (i.e. "talking within practice") or in practice itself?

Method

The Case of NCR (Dundee) and Education-for All

The case study is of NCR (Dundee), a Scottish subsidiary of a major US multinational enterprise (MNE). The Dundee plant is a world leader in the design and manufacture of automatic teller machines (ATM's) and has won a number of awards for its exporting and manufacturing performance (Wheatley & New, 1997). In the early 1990s, the Scottish plant's senior management began Education-for-All to produce significant organizational change and achieve the Dundee company's strategic objectives of growth through continuous innovation, customer-focus and cost-competitiveness.

The EFA programme, which has been in operation for eight years, embodies the principles of lifelong learning.. First it has committed the company to learning for all employees with a broad focus on education rather than training in skills development for a selected few. Second, education has been made accessible through easy access to well-stocked flexible learning centres in the company and through close links with local universities and colleges. Third, the company has encouraged self development through a well-developed career management system and courses in career development for employees, by paying the fees for any education course broadly related to the company's business and by giving employees time off work to undertake such courses.

The take-up on courses has been impressive with participation in education courses rising from 9% of all employees in 1991 to 20% in 1998. Such courses have included an introductory electronics certificate for all shopfloor staff, an extensive engineering degree programme designed to upgrade technicians, participation in a consortium masters programme and support for doctoral programmes.

The backdrop to the research project is as follows. After a decade of mass redundancies during the 1970s, the NCR plant has experienced nearly twenty years of growth in sales and profits, largely associated with the market for ATM's and other financial service machines. From the mid-eighties onwards, with the exception of only a few years, it has been the global market leader in the design, development and production of ATM's. In 1997, however, a change in (US-driven) corporate direction towards a "solutions" strategy resulted in significant outsourcing and in the recent sale of world-wide manufacturing facilities. These changes have had a clear impact on the EFA programme which has come under close scrutiny by corporate headquarters.

Data Collection

The first stage of the data collection process occurred during the period May – July, 1999 and involved a survey of a cohort of employees who participated in at least one EFA course beginning in 1995. These data were compared with a matched sample of employees who undertook no EFA course during the period to provide benchmarks for career movements, salary differentials and perceptions of psychological contracts. This control group were matched as closely as possible for age, grade and department.

The cohort of participants who were surveyed numbered one hundred and fourteen and exactly the same numbers were surveyed in the control group. These people completed self report questionnaires during group sessions that were arranged in working time, individual "drop-in sessions" for those who could not make the groups sessions and, finally, e-mailed questionnaires to the remainder. This three-pronged approach resulted in response rates of 63% and 55% for the EFA group and control group respectively.

The characteristics of the EFA respondents (hereafter referred to as the "sample") and the control group respondents ("control group") were very close in gender (approximately 85% male) and in age, although the sample modal age was 36-40 compared to 31-35 for the control group. Educationally, as might be expected, the control group had a greater preponderance of people with only school qualifications, whilst people with HND's and postgraduate qualifications were much more evident in the sample. However, the two groups were closely matched in terms of first degree level qualifications.

Following this survey stage, we undertook in-depth interviews with a random sample of twenty-five participants and compared the interview transcripts with a matched sample of non-participants. The aim of this stage of the investigation was to dig deeper into perceptions of participants of their psychological contracts and, especially into their perceptions and views on knowledge transfer. The interview material was transcribed and analyzed for key themes with the assistance of NUDIST.

Findings

1. The Payoff to the Organization in Learning Transfer to the Workplace

(i) In the survey, we asked the sample and control groups to think of an innovation or improvement that they had made in their jobs and then to indicate from a number of alternatives the most important source of knowledge that they had drawn on to make the change in their work environment. As predicted by situated learning theorists, Table 1 below showed that previous work experience was the most frequent response. The table also showed, however, that the sample group was nearly as likely to record formal or explicit knowledge as a source of improvement or innovation and was significantly much more likely to mention this source than the control group.

(ii). The sample group was asked a series of questions concerning their perceptions of the transfer of their learning from their EFA course(s). Table 2 below provides encouraging reading for proponents of formal knowledge since respondents agreed that they had used their knowledge and skills from their courses to enhance their work performance and were even more likely to have agreed that their courses were likely to lead to benefits in the future. The interview data showed a greater degree of variation on the direct contribution of formal knowledge to improvements and innovation. First, most respondents found difficulty in separating the sources of knowledge that they drew upon to make changes in their work environment. However, the majority of interviewees valued the formal aspects of their knowledge as an input into work practice. Interestingly, a difference was found between those who had attended technical courses, of which interviewees had high expectations regarding "usefulness" and those who had completed management qualifications, most of whom had lesser expectations of immediate relevance. Somewhat surprisingly, given the greater surface relevance of technical courses, interviewees found the content to be more abstract and theoretical and, thus, less useful in their work environment. This negative aspect of their education was all the more marked because of their initial high expectations of such courses. In contrast, the lower expectations that participants had of general management courses coupled with the relatively high use value of these courses showed them to be of greater benefit, especially in providing a holistic understanding of the business environment.

Table 1. The most important source of knowledge used to make a job improvement or innovation

Source	% Sample	Rank Sample	% Control	Rank Control
Previous work experience	42	1	54	1
Off the job education and training	38	2	26	2
Advice from colleagues	14	3	15	3
Advice from manager/supervisor	4	4	2	4=
Other	2	5	2	4=

Table 2. The extent to which the sample group signified learning transfer

Question	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
I have used the knowledge and skills from my EFA course(s) to enhance my work performance	18	55	18	3	3	2.54
EFA has improved my understanding of the general environment in which I work	18	49	18	7	7	2.37
EFA has improved my ability to communicate in the business environment	16	51	20	7	6	2.36
I believe that the company will benefit in the future from the knowledge and skills I have gained from my EFA course(s)	20	63	12	1	4	2.08

2. Perceptions of the Transfer Climate and Knowledge Transfer

Although the survey data showed that what had been "promised" in career terms had largely been delivered. (Martin. Pate. Beaumont & McGoldrick. 1999. September). the company was generally perceived as having failed to create a positive transfer climate. For example. 60% of the sample and 57% of the control group claimed not to have had a career development interview in the last two years. despite it being company policy to do so for most grades of employees. Moreover. two thirds of the sample claimed that their managers took little or no interest in their studies. Consequently we wished to ascertain the extent to which these features and other aspects of the transfer climate may have mediated the effects of EFA on knowledge transfer.

Somewhat surprisingly, our data showed no significant correlation among any of the transfer climate variables and our questions concerning the extent of learning transfer. Similarly, there was no significant correlations between aspects of the psychological contract such as fairness or trust in management and knowledge transfer. The only variables to correlate significantly with the extent to which knowledge had been used from EFA programmes to improve work performance were: (i) the degree of continuance commitment ($r=0.375$, $p=0.002$), (ii) the extent to which EFA had improved their view of NCR as an employer ($r=0.377$, $p=0.002$), and (iii) pride in the company ($r=0.273$, $p=0.025$). These findings on the effects of the transfer climate have to be tempered by some of the interview data which indicated that incentives to innovate which were built into the appraisal systems of engineers did have a positive effect on learning transfer.

3. Talking about Practice, Talking Within Practice and the Effects on Practice

As might be expected given that the kind of knowledge gained from schooling is likely to be at an abstract, theoretical level, the data also showed that the learning from their course had helped employees to gain an understanding of their general work environment. Arguably more importantly, however, the survey data also showed that participants felt that that their courses had given them led to a greater ability to communicate in the business environment. The subsequent interviews highlighted two major effects of the "new language" gained during their courses: first, by providing learners with *greater confidence* and, second, by giving them a greater *understanding the role of different departments and their relationship to them* (e.g. marketing.]

During the interviews, we pressed the sample group to elaborate on how formal knowledge had been used to make improvements and innovations in their jobs and to compare such schooled knowledge with tacit knowledge borne out of experience as a source of innovation. From the responses, we gained two strong impressions. The first of these, as already noted, was that participants had great difficulty in disentangling the various sources of knowledge from each other as they merged together over time. The second was that organizational improvements and innovations were rarely seen to be made as a consequence of individual intuition, but were mostly described in communal terms. Interviewees either talked positively about "creative brainstorming" and how "they tossed ideas around" in their workgroups to come up with innovations, or else they described, in more negative terms, how individual ideas were constrained by the need to ensure that the effects of their ideas did not effect other departments. In effect, significant improvements and innovations were seen to be a function of the workgroup or constrained by the need for organizational integration.

Discussion

The overall pattern of results provides general support for the argument that this programme of investment in lifelong learning has paid off for the employer in providing a basis for individual and organizational learning in the workplace. As Crossan, Lane & White (1999) have argued, one cannot have organizational learning without individual learning taking place beforehand. The process of feeding forward from individual to organizational learning rests on a process of "intuiting" that combines learning from formal schooling and informal experience.

The key findings from the study were that:

- Participants in EFA perceived that the knowledge gained was useful in providing them with a discourse of practice and an holistic understanding of their working environment (Lave & Wenger, 1991). As such, this greater ability to talk about practice appears to have given participants greater confidence to talk within practice and understand their role in the wider business environment. There was also some evidence from the survey that education had been used to make small improvements in their immediate job context.

- In line with the arguments of situated learning theorists, however, participants found it hard to identify the specific sources of learning and, if anything, stressed the informal and tacit rather than the formal, schooled sources of knowledge as key sources of innovation. Moreover, learning and innovation were seen to be a communal activity and facilitated or hindered by the extent of departmental integration and, as the interviews showed, positive incentives to use their learning.
- Where the company was perceived to have been less successful was in creating a strong transfer climate, especially in the lack of supervisor support for learning transfer.

What is most surprising, at least as far as the literature is concerned, is that negative employee perceptions of the transfer climate did not seem to be associated with learning transfer, except in general terms. One possible explanation may be that the sample was composed of career resilient, self starting individuals whose goals were more characterized by personal development, employability in the long term and psychological growth (Hall & Moss, 1998). Thus so long as departmental managers were not actively blocking or discouraging the sample group, these people were likely to use their knowledge to meet their personal goals. In short, the absence of career development systems, e.g. appraisal etc. and tangible rewards did not seem to prevent these individuals from using their knowledge. Moreover, contrary to much of the human resource literature, it is at least questionable that investing time and effort in improving these systems would have much effect..

We recognise the limitations of generalising from single, particularly atypical cases. Moreover, we are fully aware that our measures of knowledge transfer were self-perceptions. However, we hope to undertake some participant observation among informal groups to explore the processes involved in feeding forward from individual learning to group and organizational learning (Crossan, Lane & White, 1999). This will allow us to explore workplace learning from a situated learning perspective, particularly as it relates to communities of practice. However, given the these limitations, the case study data is sufficiently robust to suggest that employers who follow such (atypical) policies may reap significant rewards and which are a genuine source of competitive value.

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Emotion Work And Perceptions of Affective Culture in a Military Nonprofit Organization

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This paper explores the emotion work conducted by men and women in a nonprofit organization and their perceptions of the feeling rules in the organization. The study found that qualitative differences showing that women performed more emotion work than men were supported by a quantitative survey that measured perceptions of affective culture. Specifically, women were more likely than men to say that the culture of the organization required members to be affectively neutral ($p<.007$).

Keywords: Emotion Work, Culture, Non-profit Organization

Goleman (1995) reports a number of studies that highlight that very young boys and girls handle emotions quite similarly. However, as they mature, girls begin to respond differently than boys in many situations. Damasio (1994) points out that emotions have both a "nature" and a "nurture" component; indicating that socialization may modify an individual's emotional response, including how one experiences emotion and how one perceives the environment that drives the emotion. It is very possible that women have different emotion responses to situations because they perceive the situations differently than men. These situations may be expanded to include broader generalizations of an organizational culture. This paper looks at men and women in a nonprofit organization and explores their differences in their management of emotions and their perceptions of organizational affective culture.

Problem Statement

The management of experience and expression of emotion can be referred to as "emotion work" (Hochschild, 1983). Emotion work has been studied in a wide variety of organizations, including airlines, police departments, bill collection agencies, and health care agencies (e.g., Hochschild, 1983; Pogrebin & Poole, 1991; Rafaeli & Sutton, 1991; Smith & Kleinman, 1989). Although women have often been the focus of these studies, the reason for that was because women are often employed in *positions* that require more emotion work (Hochschild, 1983). Wharton and Erickson (1993; 1995) have specifically looked at women's roles in a variety of contexts as they were related to emotion work. Certainly emotion work studies have looked at gender within a marital or intimate relationship context (e.g., Duncombe & Marsden, 1998; Hochschild, 1990). In general, however, studies have not looked at the differences between men and women in the performance of emotion work. The present study was an outcome of a larger study that looked at how patterns of emotion work *in general* were associated with actions in a nonprofit organization (Callahan, In Press). A key finding of that study was that men and women in the organization had different patterns of emotion work. Specifically, women performed proportionately more emotion work than men did and this was particularly manifested in actions associated with the culture of the organization. Thus, this study sought to explore the possibility that men and women may have had different perceptions of the affective culture in this organization. Based on the qualitative findings, we believed that women were more likely than men to perceive the culture as affectively neutral. In other words, women would believe that the expression of emotion was not considered acceptable in this organization and would, therefore, report a lower score on the survey designed to measure affective culture. As a result, the following hypothesis was generated:
H1: Women will have a significantly lower score than men on the perception of affectivity in organizations scale.

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Theoretical Framework

This study takes a broader look at Hochschild's (1983) emotion systems theory. It first looks at the action component of emotion systems theory, emotion work. It then goes further and looks at the perceptions held by organizational members regarding the affective culture of the organization. This may be considered the feeling rules component of emotion systems theory. This section provides an overview of both emotion systems theory and organizational culture, in particular the organizational culture associated with the United States Air Force.

Emotion work is a primary component of Hochschild's emotion systems theory. Hochschild called her work as "emotion systems theory" because it is comprised of "a system composed of individual acts of 'emotion work', social 'feeling rules', and a great variety of exchanges between people in private and public life" (Hochschild, 1983, p. ix-x). Emotion work is the active attempt to change, in either quality or degree, an emotion held by an individual (Hochschild, 1983). There are two primary types of emotion work–suppression and evocation. Suppression occurs when an individual is trying to eliminate or, at the very least, subdue an emotion that is present. The cognitive focus of this act is "on an undesired feeling which is initially present" (Hochschild, 1979, p. 561). Evocation is just the opposite; it occurs when an individual is trying to draw forth an emotion that is not present. Thus, the cognitive focus of the act is "on a desired feeling which is initially absent" (Hochschild, 1979, p. 561). The second major component of Hochschild's work is that of "feeling rules" (Hochschild, 1979; 1983). Feeling rules are the "socially shared, albeit often latent (not thought about unless probed at)" (Hochschild, 1979, p. 563) guidelines that govern how we want to try to feel. They guide our expression of emotion and they guide our attempt to internalize the acceptable emotion (as defined by the situational rule). Feeling rules are embedded within the culture framing the interaction.

The term "culture" first made its way into the English language in the 15th century through French from Latin roots (McArthur, 1992). Although culture has a long history among anthropologists and sociologists, the term "organizational culture" is relatively new among management and organizational scholars (Hatch, 1993). It was first used as a synonym for organizational climate in the 1960's (Hofstede, 1997). Denison (1996) argued convincingly that the difference between organizational culture and organizational climate is actually one of interpretation. Both terms represent the same phenomenon that can be seen as creating and influencing the social context of an organization. Thus, it may be said that organizational culture, in some form, has been studied among organizational scholars for quite some time.

Probably one of the most influential scholars in the field of organizational culture is Schein (Hatch, 1993). His conceptual model of organizational culture forms the foundation of much of the research in this area. Schein (1987) argued that organizational culture has three distinct levels that interact with one another: basic assumptions, values, and artifacts and creations. Basic assumptions are the unseen preconscious beliefs commonly held and taken for granted by organizational members. Values are conscious or espoused beliefs commonly held by organizational members. Artifacts and creations are the visible manifestations of the belief system, such as uniforms or logos.

Because organizations are subsystems of larger social systems, it is important to describe the culture of organizations as they relate to the institutionalized values of the superordinate system (Parsons, 1956). Although the organization presented here is not a formal affiliate of the United States Air Force, its relationship with the Air Force and aerospace industry and its overwhelming number of current or former Air Force personnel as members suggest that the Air Force may be considered the superordinate system for this organization. The Air Force culture, of course, is embedded within the larger culture of the military.

Many would argue that the famous words uttered by General Douglas MacArthur—duty, honor, country—best exemplify the culture of the military (Taylor & Rosenbach, 1996). However, these three words are perhaps more indicative of the *conscious* values held within the military. The *unconscious* basic assumptions which truly define the nature of the culture can best be characterized as having a "combat, masculine-warrior" orientation (Dunivin, 1994). While the military incorporates a wide variety of activities, one activity associated with the military defines its very existence—combat. In the prologue to the second edition of his classic treatise on the professional soldier, Janowitz commented that, "the notion of combat—preparation for battle and actual battle—has remained a central military value" (1971, p. xiv) throughout history. The masculine-warrior image is the second element of the military culture. Dunivin (1994, p. 533-534) describes the origin of this image:

> As an institution comprised primarily of men, its culture is shaped by men. Soldiering is viewed as a masculine role—the profession of war, defense, and combat is defined by society as men's work. Thus, a deeply entrenched "cult of masculinity" (with accompanying masculine norms, values, and lifestyles) pervades military culture.

Associated with this underlying combat, masculine-warrior culture is the traditional model of the military. This model "espouses conservative moralistic ideology as reflected in its ethics and customs" (Dunivin, 1994, p.

534). The traditional model reinforces socialization that complements the masculine norms and values of the underlying military culture. The military typically recruits and rewards those individuals who embody the combat, masculine-warrior ideology. This has resulted in an officer corps that is dominated by white men who perceive themselves as masculine warriors. However, the changing perspectives in American culture have begun to influence the models associated with the military culture.

An alternative model of the military is beginning to challenge the traditional model of military culture. This evolving model, largely in response to social pressure, is marked by more inclusionary beliefs, policies, and practices (Dunivin, 1994). This model is also based on the changing attitude among many military members that the best-qualified person should be selected for assignments, regardless of race, gender, or sexual orientation. Despite the growing influence of the evolving model, the military is still marked by the underlying culture of the combat, masculine-warrior. Thus, conflict and change is inevitable; yet the outcome is not certain. As Dunivin (1994) points out, this uncertainty leads to an enduring culture that embodies both change, with the evolving model, and continuity, with the traditional model.

The Air Force culture

Although the Air Force is the newest of the military services, there is some support that it may embody the traditional model more than the evolving model. In comparison to the other service branches, the Air Force has a higher percentage of non-combat occupations which offer the potential for a higher percentage of female participation (Stoddard, 1993). As the evolving model opens more occupational specialties to women, that percentage will probably increase. Nevertheless, a study conducted by Stoddard (1993) found that:

> ...the relatively low rates of female participation in the Air Force as compared to its minimal combat roles, cannot be attributed to organizational constraints. This might well be an informal consequence of gender preferences by its leadership (p. 30).

This gender preference among senior Air Force leaders had been made public by then-Air Force Chief of Staff, General Merrill McPeak when he testified before Congress in 1991:

> ...if ordered to choose between an inferior male pilot and a much better female pilot, he would choose the male. 'I admit it doesn't make much sense, but that's the way I feel about it,' he said. In other words, for General McPeak the issue is not job performance or ability, or even military effectiveness. The existence of female combat pilots would simply offend his sense of proper gender roles (Dunivin, 1994, p. 536-537).

More examples of the gender preferences institutionalized in the Air Force can be seen in symbols found at the elite proving ground of the United States Air Force Academy (USAFA). Academy graduates, in particular, are often considered to be the "professional" soldiers who are responsible for being the bearers of the military culture (Janowitz, 1971). The inscription that greets every individual who approaches USAFA reads, "BRING ME MEN." This is a very clear symbolic message to cadets being indoctrinated into the Air Force culture.

Despite the dominance of the traditional model of military culture, the evolving model of military culture certainly influences the Air Force. As with other branches of the military, external forces for social change have brought more diversity into the Air Force. Women and minorities have been integrated into most specialties within the Air Force, perhaps reluctantly. The strong culture of the Air Force has been influenced by laws and policies that have required the acceptance, or at least broader official tolerance, of minorities, women, and gays. These civilian directives are generally accepted by and eventually assimilated into the Air Force because the service adheres to the Clausewitzian model that the military is at the disposal of the civilian, political leadership of a nation because war is simply an extension of politics, but by other means (Paret, 1986). Thus, when given a directive, even one that conflicts with the very nature of the Air Force culture, the Air Force follows the directive. Only then can the evolving model of organizational culture begin to take a foothold.

Methodology

This was a primarily qualitative study that incorporated a quantitative survey as a triangulation element. The research site for the study was a nonprofit organization associated with aerospace and national defense. The organization is primarily composed of Air Force active duty and reserve component members, veterans, and retirees; however, membership is also drawn from civil service personnel, cadets, and civilian individuals who have never experienced military service, many of whom are affiliated with aerospace industry. The sample from this study was drawn from the professional staff, the Board of Directors, and the senior state leadership.

Four methods of data collection were used (individual interviews, observations, surveys, and document analysis) to provide a measure of validity through data-collection method triangulation (Patton, 1990; Yin, 1994). The survey that served as a data-collection method triangulation element contained a scale developed to measure the perceptions of affectivity-affective neutrality (i.e., the affective culture in the organization) (Parsons, 1951). The items for the scale were drawn from two studies on role expectations and conflict using Parsons' (1951) affectivity-affective neutrality pattern variable (Podell, 1966; 1967). The original studies focused on marriage and family contexts, so the items were modified for use in an organizational setting for this study. The items were as follows:

In this organization:	too much emotional involvement can lead to unrealistic plans.
	a certain amount of emotional detachment is necessary to achieve success.
	I would not be successful if I became too emotional.
	you cannot let sentiment overcome objectivity if you want to be effective.
	decisions regarding issues that affect the organization should not be influenced by sentimental factors.

The five Likert-type items had face validity and had shown reliability in the earlier studies (Podell, 1966; 1967); the Cronbach alpha performed on the data from the present study was .72. This was considered to be a sufficiently strong indicator of reliability for a scale with less than ten items (Cortina, 1993; Spector, 1992). Because this study was exploratory in nature, based on qualitative findings, further efforts to establish validity beyond face validity were not pursued. Certainly, future attempts to establish a more definitive connection between the performance of emotion work and the perceptions of the affective culture among men and women would require further validation of the scale.

The survey was administered to 242 members of the professional staff, the Board of Directors, and the leadership of the states. The sample size for the quantitative component of the study was 153 (119 men, 34 women). The 25 (16 men, 9 women) individuals interviewed for the study were selected from those organizational members who returned the survey. This ensured that a triangulation point was available for all interview participants. Over 800 pages of transcribed interviews and correspondence were content-analyzed using NUD*IST software. "Disinterested" colleagues performed coding and data interpretation verification. In addition, seven scholars with a basic understanding of the theoretical framework, yet unfamiliar with the research site, reviewed the findings and interpretations for consistency. Two staff and two volunteers in the organization also reviewed the final document for accuracy of interpretation.

Finally, a *t*-test was conducted using the 153 survey respondents to determine if the qualitative differences found between men and women in the performance of emotion work could be supported by the quantitative survey that captured perceptions of the affective culture, or feeling rules, in the organization. Certainly the two comparison groups differed in size (119 men, 34 women). There is debate about the negative implications of unequal group size on simple comparisons of means (Lomax, 1992). However, because a significant difference in variance between the two groups would exacerbate any potential negative implications (Hinkle, Wiersma, & Jurs, 1994), a homogeneity of variance test was performed. There was not a significant difference in the variance of each group ($p<.500$); thus, further comparison between the two groups was warranted.

Results

In the interviews and written documentation, a total of 174 incidents of emotion work were identified out of 605 references to emotion. While women did not necessarily perform the majority of the emotion work actions, they often performed more emotion work than expected based on their representation in the interviewed sample. For example, women represented 36% of the interviewed sample, yet they accounted for 46% of the references to emotion. Also, while men comprised 75% of the volunteers from whom documentation contained emotion work references, their comments accounted for only 57% of the emotion work actions discussed by volunteers. In other words, women seemed to perform more emotion work in this organization, particularly among the volunteer members. It is important to note that women were not well represented in the senior leadership of this organization. In the fifty-year history of the organization, only two women had ever served as a national officer; both as National Secretary. Further, among the staff leadership, only one of the ten senior staff members was female.

The vast majority of the emotion work incidents, 115 of them, were associated with suppression of emotion. Women mentioned approximately 51% of the actions regarding the suppression of emotion. The content and type of emotion work did not differ substantially between men and women, however. The emotions suppressed were primarily negative affects, including frustration, anger, disappointment, fear, and sadness. One female participant reported her emotion work associated with a critical project:

> I was so stressed out by this and it was like [he] didn't get it. ...[T]he toll it took in stress level...was phenomenal. I was so stressed out...that when I went to my therapist, who I was venting all this stuff to, I just said, "I am so angry, I'm about to hit somebody. I'm afraid I'm going to haul off and slap somebody."

Women performed an inordinate amount of emotion work, usually suppression, associated with cultural issues in the organization. Several of them referred to the organization as a "white, male, preferably pilot" group or a "Good Ol' Boy network". One female volunteer, a pilot, talked about suppressing her anger at an older male volunteer who voiced his opinion that leadership positions should be reserved for (male) pilots. She commented that she suppressed her desired response of, "Well, you know, I have to take my skirt off to put on my flight suit."

There were also two cases of suppression of positive emotion. One female and one male staff member discussed the suppression of positive affect in relation to holding back praise for the success of others. When discussing interactions with "the field", the volunteers throughout the United States, Europe, and Asia, a male staff member said, "I have the occasion, the good fortune, once in a while to be with one of these effective groups and it's a feeling of inspiration and admiration.... And I don't think it's necessarily appropriate [to express that] other than in simple ways." Regarding daily operations on the staff, a female member commented that, "we don't make a big deal if somebody did a *great* job. It's just, 'I'm proud to be working with you.' Guess what? We can do this thing again next year."

Evoking emotions was mentioned 20 times. Not surprisingly, positively valenced affects were most often the elicited emotion. The affects ranged from evoking a simple smile to generating the appearance of being enthusiastic. Women were responsible for 60% of the references to evoking emotions. Once again, the difference between men and women was not in the content or type of emotion work; rather, it was simply the amount of emotion work each performed. One example of evocation of positive affect was mentioned by a female volunteer:

> ...there are lots of times throughout the meeting where I'm really not interested in what they're talking about and I tend to try to look like I'm interested in what they're saying without closing my eyes or doing something...that I think would be inappropriate. I sit there and look like I'm interested in what's going on.

There was, however, a negative affect evoked for one male volunteer. At the opening ceremony of the organization's annual convention, a "Roll of Honor" is presented to honor those organizational members who died during the previous year. While another member commented on her genuinely felt sadness during this event, one volunteer talked about how he usually had to evoke sadness because he did not know any of those who had died. He was often able to generate feelings of sadness:

> You say it's sad possibly for those people around him that loved him or respected him or worked with him or whatever. Especially if it's not somebody that has died because they got old, but somebody that died at a younger age.

A unique type of evocation of emotion appeared in this study. Most researchers have reported two distinct categories of emotion work, suppression and evocation (e.g., Hochschild, 1983; Wharton, 1993). However, several respondents in this study explicitly discussed occasions in which they evoked an emotion in conjunction with suppressing another. Because references to this phenomenon have not been made in other research associated with emotion systems theory, I refer to such occurrences as "veiling", using one emotion to cover up another. This is similar to the Freudian defense mechanism of reaction formation (Juni, 1997; Newman & Newman, 1995). There were 14 references to veiling emotions. For example, one staff member worked with a major awards program for the organization. She found the awards recipients ungrateful and arrogant. In short, she just didn't like to be around them. Nevertheless, she swallowed her anger and put on a smile for the duration of her contact with the recipients.

A retired senior officer who had served in Vietnam gave the most poignant example of veiling. He equated emotions to a "monster" that needed to be controlled in order to serve effectively. Describing his experience with combat, this volunteer remarked:

> ...here their best buddy just got shot down and they saw him being led off. And that night they're having a party like an Irish wake and they're saying, "Well, the guy was really stupid because he did something dumb and that's how it happened." That's how you isolate yourself.

This type of veiling is similar to what Ashforth and Humphrey (1995) refer to as "normalizing" emotions. In other words, undesirable emotions are reframed to maintain harmony.

The references to veiling were relatively disproportionate between male and female respondents. Women, who represented 36% of the subjects, reported 43% of the veiling incidents. Interestingly, this was the only category in which men performed a greater percentage of the emotion work. In all but one case, the valence of the emotions related to veiling was mentioned, negative emotions were always suppressed and positive emotions were always evoked. The final case was a generic reference to veiling that did not specify the emotion.

Finally, subjects made 25 references to generic emotion work or managing emotions. This generic emotion work referred to managing emotions in general, without specific discussions of what type of management was being used (i.e., suppression, evocation, or veiling). Like both the suppression and evocation of emotion, generic emotion work references were disproportionately female (56%). Often these references focused on managing emotions of others, in particular in the context of leaders managing followers. For example, one male participant remarked:

> I always used to as a young officer watch the…commander…get up there and tell [us] how great we all are. You know, be the motivator. And as the cynic in me always said, "Isn't this goofy?" But over time as I learned about the cohesion and saw the cohesion, I realized it's a very, very important part of the cohesion even if, as a leader, you sound goofy. You know, in front of some of the most cynical you *are* really, [but] the message is being received.

In summary, the qualitative findings revealed four different types of emotion work—suppression, evocation, veiling, and generic. Overall, the content of the emotion work and the type of emotion involved were fairly consistent between men and women. The key difference was found in the amount of emotion work actually performed. In general, women performed a greater amount of emotion work than men in this organization, especially in reaction to cultural issues. The distribution of emotion work is at Table 1.

Table 1: Distribution of Overall Emotion Work Actions by Type

	Suppression	**Evocation**	**Veiling**	**Generic Emotion Work**
Male	56 (49%)	8 (40%)	8 (57%)	11 (44%)
Female	59 (51%)	12 (60%)	6 (43%)	14 (56%)
Total	115 (66%)	20 (12%)	14 (8%)	25 (14%)

Because the women appeared to be performing more emotion work than the men, in particular around cultural issues, the survey responses to affective culture were analyzed. This t-test was performed simply to determine if women and men had a different perception of the extent to which displays of emotion were accepted in the organization. A significant difference would lend support to the qualitative findings that seemed to show that women performed more emotion work, perhaps because of their perceptions of the organizational feeling rules. A higher score on this scale indicates a perception of a more affective culture; a lower score indicates a more affectively neutral culture. Based on the qualitative findings, one would expect to find that women perceived a more affectively neutral culture in this organization (i.e., they would have a lower score). The mean score for women was 19.7; the mean for men was 21.7. The difference between the male and female scores on the affective culture scale was significant at $p<.007$.

Discussion

The quantitative findings supported the qualitative findings in this study. The vast majority of emotion work conducted in this organization was suppression; women performed more emotion work than men; and women were more likely to perceive that the culture of the organization required affective neutrality (i.e., emotional suppression). Thus, the emotion work performed by women in this organization may largely stem from their perceptions of this organization's Air Force-based "combat, masculine-warrior" culture. Certainly the male dominated culture of the organization and the more pronounced minority status of women in the organization may be a factor in the higher levels of emotion work conducted by women. It is also possible that women are more "in tune" with their feelings as some literature on encoding (expressing) and decoding (interpreting) emotion suggests (Gallois, 1993; McConatha, Lightner, & Deaner, 1994).

Women may also report more instances of suppressing anger than men because of the negative cultural perception associated with women expressing such emotions. Research suggests that behavior associated with assertiveness is viewed more favorably when it is performed by men than when performed by women (Davis, LaRosa, & Foshee, 1992). Comments by male volunteers suggested that they believed women should engage in activities and professions intended to "support" their husbands. There was also a belief that women had not risen to the highest leadership ranks of the organization because those who were otherwise eligible tended to be "too masculine" or "too aggressive". In other words, they did not fit the cultural model either for women or for organizational leaders. In any case, there is a power differential between men and women in this organization that suggests a need for the women to manage their stronger negative emotions in order to succeed (Davis et al., 1992; Gallois, 1993).

Dunivin (1988) and Tetreault (1988) argued more than ten years ago that women in the military did not have a critical mass to have a voice for change. While that is *probably* still true for the active duty military, it is *definitely* true of this military-influenced organization. Dunivin (1988) noted that women in the Air Force "internalized the male-defined work identity and role" (p. 64). A similar phenomenon may be occurring among the female volunteers. This internalization may have created a kind of dissonance for the women. Two of the four female volunteers discussed the importance of not only maintaining a leadership identity among the male volunteers but also maintaining relationships with the wives of the other leaders. They seem to have recognized that many of the men, at least subconsciously, considered the wives to be the peer group of the female volunteers. But, by becoming active as volunteers, these women were no longer considered peers by the wives of the male volunteers. As a result, the women volunteers "accentuated work roles that were rewarded" and "downplayed devalued gender roles" (Dunivin, 1988, p. 64) in order to fit in.

Contributions to HRD practice

The imbalance in the performance of emotion work by men and women in this organization has several implications for this organization, and perhaps others. This organization has had difficulty promoting women into leadership positions. This may be partly due to the emotion work conducted by women because of their perceptions of the organizational culture. They perceive that their emotional inclinations are not valued and, perhaps, that may translate into a devaluing of them as members of the organization. As indicated earlier, women in the Air Force culture downplay feminine, emotional roles in order to highlight their (perceived) more valued roles associated with masculinity (Dunivin, 1988). In other words, perceptions that encoding and decoding emotions (Gallois, 1993; McConatha et al., 1994) are not valued skills may lead some women to suppress what may be key to their ability to perform in leadership positions.

Not only is it possible that emotion work and the perceptions of affective culture would inhibit women from seeking and/or achieving the highest levels of leadership, it is also possible that emotion work has other influences on leadership factors in the organization. Damasio (1994) highlights the critical importance of emotion in cognitively based leadership functions such as decision-making. Not only do leaders need access to their own emotions, but they also need access to the thoughts and feelings of those involved in the decision. However, if those individuals perform emotion work to hide what they perceive as inappropriate emotions, leaders' decisions will not be as effective as they could be.

In addition, a culture that devalues the expression of emotion may disrupt the ability to recruit new members, especially female members. The lack of women in leadership positions, the perceptions about emotion, and findings from more comprehensive studies on gender issues in this organization (see Callahan, 1999) suggest that the culture may not be accepting of women. Thus, both male and female members who subscribe to the "evolving" (Dunivin, 1994) model of culture may grow weary of a culture hostile to women and choose to suspend active involvement in the organization. By failing to include a large segment of society that is increasingly represented in the organization's largest constituency base, the Air Force, this organization may distance itself from the very people it was created to serve. Finally, members may find it difficult to educate a more enlightened public about the importance of air power, a key organizational mission, if they are out of step with the larger culture.

MacArthur's stirring words of "duty, honor, country" may indeed serve as a "rallying point" for military members, in particular when they are engaged in combat. However, the implication of a "combat, masculine-warrior" culture connected to these words may not be effective in the daily operations of an organization affiliated with the military culture. If the organization does not attend to the management of emotional experience and expression conducted by its members, emotion work may contribute to the demise of this organization that is firmly rooted in the core values of "duty, honor, country."

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Mature Behavior in Organizations: Indications of Growth and Learning in the Workplace

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If emotional and cognitive maturity is understood and acknowledged in organizational interactions, then the chances are increased that participants can meet the complex needs of today's organizations. This paper presents a four-stage model of development and links it to organizational learning.

Keywords: Behavioral Indicators, Workplace Learning, Organizational Learning

Some experts believe the only sustainable advantage an organization will have in the future is its ability to learn faster than its competitors (Kapp 1999). Such competitive advantage can be achieved by transforming the organization into a learning organization, providing a stimulating climate for seeking new approaches to perform work. In fact, organizational learning can be developing new knowledge and changing behavior to improve future performance (Barker & Camarata, 1998).

Organizations which have a continuous and enhanced capacity to learn, who acknowledge their human capital, were found by Mariotti (1999) and Kapp (1999) to have an average 17 percent increase in productivity. Part of this can include an increased awareness of developmental growth among members coupled with a relation-based environment.

The purpose of this paper is to develop a model for developmental growth of individuals in organizations and to understand its implication for creating a healthy organization, a high-performing system.

Background on learning organizations

Despite its importance, not all organizations have been able to transform themselves and achieve the characteristics of high-performance systems or learning organizations (Quinn, 1996; Cooper & Schrabraq, 1998; Rashford & Coghlan, 1994). The learning organization does not just happen; conditions must be developed and nurtured for change to occur. Senge (1999) maintains that most change initiatives fail because organizations do not foresee the obstacles that arise naturally wherever growth and learning take place. As organizations mature, do leaders allow employees to mature as they use their successful and unsuccessful experiences as learning opportunities? Do obstacles such as immaturity distort and filter information, thus reducing learning? If maturity (and its lack) is acknowledged in organizational interactions, then participants have a greater chance to meet the complex needs of today's organizations

Conditions in modern organizations sometimes work against the development of maturity. As more information is presented ever more quickly, with chaotic and unpredictable changes, employees find that they must approach work differently. Downsizing, flattening hierarchy, increased competition, globalization, and intensified technology can leave workers with a possible sense of powerlessness and insecurity (Hirschorn, 1999). As a result, employees themselves exhibit behavior inconsistent with organizational learning. For example, Lancaster (1998) and Argyris (1998) found that employees often exhibit immature behavior when threatened or embarrassed (e.g. defensiveness), and this impedes organizations from reaching optimal levels. Such immature behavior may be the result of both personal and organizational factors and may manifest itself on the organizational culture in ways that causes alienation of workers, disenchantment of customers, and encourages individuals to move away from their espoused values (Marcic, 1997). To develop the characteristics of a successful learning organization, workers need to have the emotional development to increase their learning potential as they interact with others, and respond to the continuous changing environment of a learning organization.

Creating a learning environment ought not to be difficult, as research shows individuals come fully equipped with insatiable drive to explore and experiment (Roth & Kleiner, 1995; Erikson, 1982).

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Unfortunately, many organizations are oriented predominantly toward controlling rather than cultivating employees' natural curiosity and impulse to learn (Senge, 1999). Many of these employee-organization relationships are based primarily on rational choice theory where each transaction between parties is based on "I will do this for that," effort is exchanged for a known, specific outcome of equal value (Barker & Camarata, 1998). The choice is primarily economic. Employees' focus on behaviors derived from specific duties and tasks assigned to their jobs. By acknowledging maturity levels of participants within organizational relationships, it can encourage individuals to operate from Blau's (1964) social exchange theory. Instead of acting out of economic calculation, individuals benefit one another on the basis of concern for the other's welfare. Blau (1964) asserts that in terms of performance and/or attitudes individuals generally excel when employees base their relationships less on economic or quid-pro-quo transactional basis (more short term) and more on a focus of personal connection with the leader and/or organization (more long term). This supports the conceptualization that higher level of growth and maturity leads to higher levels of productivity and an enhanced learning environment.

This all-encompassing social exchange and developmental growth foundation could be useful in developing organizational learning. An organization can build effective relationships with employees if certain conditions are met of support towards individual maturity or emotional growth embedded in an employee's work life.

Integrating employees and organizations for learning

Gherardi (1999) defines the culture of learning organizations as being action orientated, geared toward creating a type of organization in which learning is maximized through interaction within the environment. In reality, the culture requires individuals to learn and transfer the knowledge acquired from participants to modify structures within the organization, and that learning leads to an improvement in performance (Gherardi, 1999).

In change efforts, participants become fixated on the process of change itself, and often fail to recognize the importance of the human elements, including learning capabilities within the employees (Birkner & Birkner, 1999). Focusing solely on the mechanics of the change process, rather than the people and their needs, can overwhelm even positive and strong individual characteristics (Figure 1). This over-emphasis on organizational structure can prevent and/or discourage individual development and organizational learning. In the learning organization culture, both individual needs and organizational structures need to be in balance to carry out what has been learned, and thus expand learning capabilities and capacity (Fisher & Fisher, 1998; Birkner & Birkner, 1999).

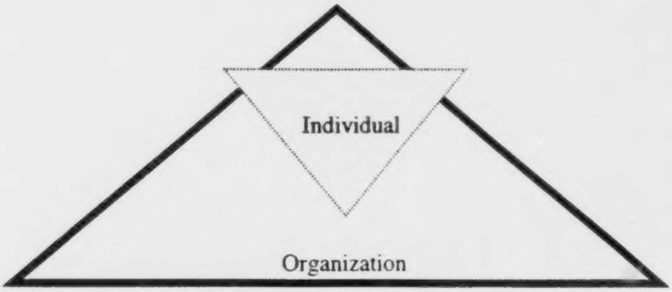

Figure 1: Imbalance of Organizational Structure and Individual Characteristics

It has been suggested that increasing an individual's psychological development puts an organization on a firm foundation of strong character, i.e., ethics, integrity, and honor (Marcic, 1997), which will enable its members to contribute to the organization's learning. It is possible that aggregate employee maturity is a critical factor in the achievement and performance of an organization as a learning organization. As individuals mature they increase their capacity to learn, think, and create. They recognize that they can learn moment by moment, which can turn into wisdom--not just information or knowledge (Johnson, 1999).

Theoretical framework for developmental stages

The first step in evaluating and addressing the impact of employee maturity level on the development and maintenance of a learning organization is to assess an employee's developmental level within the organizational culture. Though much research has been done on developmental stages of organizations (Miller, 1989; Quinn, 1998; Kimberely & Miles, 1981), it has focused on the cycles of the organization themselves, rather than individual members. There is, however, some recognition that organizational learning includes a psychosocial dimension, and that the learning behavior of individuals within groups is significant. Salner (1999) emphasizes the need for individuals to change their cognitive maps, that is, their habitual ways of understanding organizational situations. This research will look, developmentally, at the cognitive-behavioral properties of individuals and their potential to be a skilled contributor to organizational learning as they interact with the organization.

Drawing from the work of Fowler (1981) and Erikson (1982), the 4-stage model presented below (Figure 2) has been developed to provide a developmental framework to assess individuals' level of cognitive and emotional maturity as it relates to organizational behavior. As individuals interact within the organization, behaviors are demonstrated through the following four stages: Egocentric, Protective, Compliant and Dynamism. Each stage is present in some form throughout an individual's experience in the organization, but reaches its own dilemma at a specific time as organizational interaction occurs.

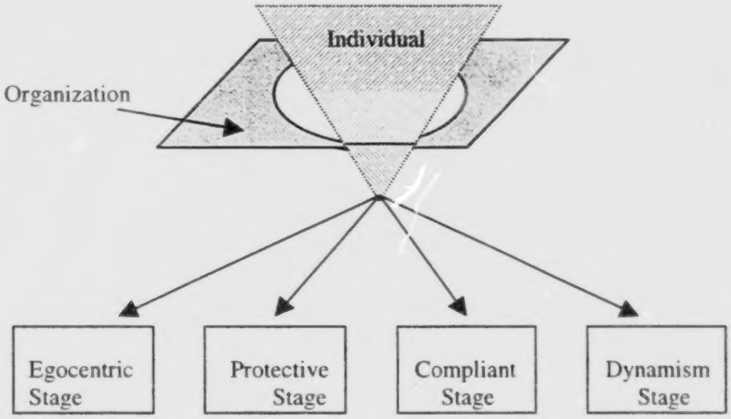

Figure 2: Cognitive and Emotional Maturity as a Result of Individual-Organizational Interaction

Egocentric Stage – Individuals in the egocentric stage are more dependent on the actions of others, have limited ability to differentiate their own perspective and are acutely submissive to those in authority positions. This stage represents a general encounter between the individual's maturing ego and the social world. Members look for consistency, predictability, and reliability in the leaders' actions. A sense of trust is developed in their leaders, and workers show it in their behavior. They learn to trust themselves. As they develop confidence in their abilities, they also develop a faith in the organization and its leaders. During this time when leaders feel anxious, the worker will feel anxious; if the leader feels calm, the worker feels calm. These interactions in turn influence later attitudes. If the worker can develop a favorable balance of trust over mistrust, he/she will develop a core ego strength in this stage or a sense of hope. Hope enables the worker to move forward and enthusiastically confront organizational events despite current and past frustrations.

Protective Stage – The protective stage represents behaviors that are defensive in nature. Individuals see the world in a linear and predictable way, and are often extremely competitive due to a perceived mistreatment by others. Cognitively, they are unable to detect and correct errors in judgement. However, when this happens, leaders do not permit the individuals to enjoy their independence. Instead they train the workers to behave in the socially acceptable way defined by the organization. The battle during this time is between the worker's autonomy and the organization's regulations. When workers insist on correcting a problem in the work place, leaders will try to regulate their choices or behavior. In this stage individuals begin exercising their will, and developing their sense of autonomy within the system. They want to be independent and learn the organization's culture and values on their own. They insist on making their own decisions, even if it means exercising their right to make a mistake. They begin to defy external control. Individuals are also very aware of social expectations and pressures. There is a fear of not looking good in others' eyes. The fear encourages doubt in their abilities and the realization that one is not so powerful after all; that others can control one perform actions much better. It is through the hope developed in the prior stage that workers can learn to adjust to social regulations without losing too much of their initial sense of autonomy. During this stage the leader's role is two-fold. First, without crushing his/her independence, the leader assists the worker as the worker learns accepted organizational behavior. Second, the leader should not break the worker if they show oppositional behavior; or ridicule if they take the initiative to do things on their own. An objective in this stage is to develop the determination to exercise free choice as well as self-restraint. The worker is the one in charge, not the external powers.

Compliant Stage – In the compliant stage power is relinquished to external parties, which resides in the leadership of the organization. There is a fear of being assertive because of losing one's place in the social structure of the organization. This stage may become a permanent place of equilibrium for those individuals whose sense of powerlessness continues to manifest itself in the organizational culture. The danger in this stage is an excessive feeling of inadequacy and inferiority. The compliant stage tends to be a period of calm and stability. However, this is a decisive stage for growth in which individuals master important cognitive and social skills. Individuals begin eagerly learning the useful skills and tools of the larger culture and conform their individual behaviors to the organization. During this time, learning is often informal, and comes from more experienced workers. Workers enter training programs and are asked to master more skills. They learn to do more meaningful work and develop strengths of steady attention and persevering diligence. They are also learning to work and interact with their peers. The successful resolution of this stage leads to a strength Erikson calls competence, the free exercise of intelligence and skill in the completion of tasks, unimpaired by excessive feelings of inferiority.

Dynamism Stage – Individuals in the dynamism stage must withstand a certain amount of frustration. Individuals in this stage can begin to indulge themselves as if they were the one and only individual in the process. This stage is the highest level of development. Creativity, collaboration, listening, sharing resources and rewards within the organizational culture characterize it. Individuals begin to examine the norms and make choices using their judgement. They are able to communicate and share their beliefs while listening and taking into account other's thoughts. This stage is rare because it is a unique way individuals relinquish their power for the sake of a greater purpose. They have a special wisdom that unifies and transforms their environment. They become concerned with developing the next group leaders. They enter into what Erikson calls generativity which refers to the production of things and ideas through work. They teach and guide others by working with individuals to help create a better organization. There is a sense of order to one's place in the organization, and the acceptance of that place. Integrity is developed that says, "Yes, I make mistakes, but given who I am at the time and the circumstances, the mistakes are inevitable."

Implications for HRD

As individuals interact within the organization, they respond based partly on their level of cognitive and emotional maturity. Erikson (1982) believes people obey their own inner laws of development, and creates a succession of possibilities based on their own, as well as others developmental levels. For example, at the protective stage, when maturation occurs, it ushers in a sense of autonomy where individuals can behave independently and make decisions based on their abilities for the good of the company. At the compliant stage, maturation prompts a new interest in discovery, along with capacities for curiosity and new ideas encouraging learning among work groups.

At the same time, the culture of the organization can evolve such that it invites and meets this inner, maturational succession of potentialities. For example, when the individual at the egocentric stage demonstrates a new degree of self-control, change agents in the organization may consider the individual ready for new skills training. However, the result is sometimes a battle of wills, between the worker and the organizational society, which creates a crisis at that particular period. It can be that the organization is at a lower level of growth than the individual matures to. So whereas managers are exerting tight control, which tends to produce immature behaviors, a particular employee may be searching for more autonomy and growth—finding this environment unsuitable for maturation.

Therefore, there may be lack of fit, either with an immature employee who is put in an empowerment program and begins to feel frustrated and over-whelmed, or the situation where a mature employee is in a rigid top-down command-control environment and starts to suffocate from lack of independence and opportunities for growth.

Our purpose is to continue to try and understand more about these developmental stages and how they affect learning in organizations.

Summary

This paper has presented research in progress to determine how an individual's interactions, work behavior, and attitudes are associated with various stages of emotional development or maturity. Acknowledging how workers move through these stages toward maturity can be an indicator of a successful learning organization. Using this model to provide a framework for measuring individual development will enable organizations to evaluate this critical element and work to develop their human capital into a strong relation-based group of employees, which in turn will promote a successful learning environment.

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Sensation-Seeking Behaviors: Predictors of Job Performance?

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Although sensation seeking has been found to have important relationships with job satisfaction and cognitive performance, limited information exists about its possible relation to workplace learning and job performance. Four service-industry companies were sampled (N = 233), and path-analytic techniques were employed to demonstrate that sensation-seeking behaviors can negatively influence workplace learning and technical and interpersonal job performance, as well as job satisfaction. Implications for human resource professionals are considered.

Keywords: Sensation seeking, Job performance, Socialization processes

Various researchers have found the sensation-seeking construct to be meaningfully related to social relationships (Cappella and Green, 1984), openness to change (Bjork-Akesson, 1990), "burn out" (Meier and Schmeck, 1985), life stress (Zuckerman, 1994), job satisfaction and employee intention to quit (van den Berg and Feij, 1991), vocational interests (Zuckerman, 1994), occupational risk taking (Musolino and Hershenson, 1977), and need achievement and cognitive performance (Scroth and Lund, 1993). Zuckerman (1994) called sensation seeking "a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (p. 27). Thus, an individual possessing a high level of this personality trait would be expected to have a higher need to seek stimulation and novelty, experience different things, and take physical and social risks, all for the sake of maintaining an optimal level of stimulation and arousal. Conversely, a person having a low level of sensation seeking would be expected to have a lower threshold for optimal stimulation and arousal, resulting in less need to undertake risks and experience novel situations.

Sensation seeking has been examined empirically in the psychological and business literature in many absorbing ways, with extremely relevant results to academicians and practitioners alike. However, almost no exploration of its significance to the field of HRD has been undertaken. Knowledge of any relationship between sensation seeking and the workplace learning process and/or job performance could be especially valuable to anyone interested in facilitating learning and enhancing optimal performance.

Review of the Related Literature

In social situations, high sensation seekers excel as they tend to dominate conversation and engage in a great deal of social disclosure, even with strangers (Franken, Gibson, and Mohan, 1990). Thornton, Ryckman, and Gold (1981) found that high sensation seekers tend to select topics of discussion other than those on which they think there will be agreement. The researchers attributed this behavior to the value high sensation seekers place on conflict and differences as positive sources of arousal. In their study of nonverbal behaviors, Cappella and Green (1984) discovered that high sensation seekers were more affiliative in their nonverbal behaviors, such as posture and eye gaze, and emotionally expressive (e.g., more smiles and laughter) because of their propensity toward being more spontaneous and open to novel surroundings and contexts. In essence, high sensation seekers seem to thrive on social contact because of its potential for arousal and to express their desire for social relations through affiliative behaviors.

In a classroom context, Bjork-Akesson (1990) detected a relationship among adolescents between high sensation seeking (using an expanded version of Zuckerman's construct) and openness to varying learning contexts and group activities. She stressed that because high sensation seekers have a higher threshold for stimulation and

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arousal, they are, in general, less likely to be overwhelmed in novel situations, and do better in such highly variable contexts since they find inconstant situations to be stimulating.

In an experimental study with college students, Scroth and Lund (1993) examined the relationships among need achievement, cognitive performance, and sensation seeking in transient test conditions. This study is a quite a departure from much of the research already presented because it investigated the possibility that sensation seeking could be situational and thus aroused under certain experimental conditions. In this particular study no relationship was found, but this issue should be explored further as there is considerable evidence from the study of similar psychological constructs (e.g., curiosity, anxiety, and anger) that there can be a "state" or "situational" aspect of personality traits. Nevertheless, the researchers ascertained that sensation seeking was positively and moderately related to measures of divergent thinking and creativity, and situational work and mastery achievement. Overall, they reasoned that subjects "who are willing to work hard, desire to perform a task well, and like 'difficult' tasks also tend to be sensation seekers characterized by a preference for unusual experiences, risk taking and dislike of routine" (p. 865).

Meier and Schmeck (1985) explored the relationship between academic "burn-out" and sensation seeking, observing that college students who were low sensation seekers suffered more from burn-out because they were less adept than high sensation seekers in finding ways to vary their college experiences. Similarly, Zuckerman (1994) claimed that low sensation seekers were more vulnerable and reactive to life stress, as their capacity for handling rapid change, ambiguity, and atypical contexts is relatively low.

Investigations into occupational risk taking indicate that individuals in risky occupations, such as air traffic controllers, paratroopers, test pilots, firemen, and policemen are more likely to be high sensation seekers (Musolino and Hershenson, 1977). Further, Zuckerman (1994) reported on correlational relationships between his Sensation Seeking Scale (SSS, a well-studied operationalization of the sensation-seeking construct) and vocational interest using the Strong Campbell Interest Inventory. The SSS was found to be positively related to the interest scales from the "helping professions" (e.g., psychology, social work, teaching, and the practice of medicine). On the other hand, interest in business vocations in which routine transactions predominate (e.g., banking, accounting, and purchasing) were inversely related to the SSS. These relationships make considerable sense: Because high sensation seekers seek out social interactions and find them to be stimulating and arousing, these individuals would find vocations associated with the helping professions more satisfactory.

Finally, in an organizational study conducted in the Netherlands, van den Berg and Feij (cf. Zuckerman, 1994) used a Dutch version of the SSS and measures of work stress and job satisfaction to predict employees' "intent to leave" their jobs. The investigators learned that while job satisfaction was the strongest predictor of the dependent variable, sensation seeking directly predicted an employee's intent to leave as well. The authors concluded that the relationship between sensation seeking and intent to leave reflected the employees' need for variation and change, regardless of their job satisfaction.

Rationale for the Study

Sensation seeking and its related behaviors have relevance in workplace settings because they may be able to predict cognitive performance, employee stress, job satisfaction, and intent to leave. Yet little research has been undertaken to determine their significance in organizational contexts beyond the aforementioned van den Berg and Feij study. For example, little information is available on how sensation seeking affects individual workplace learning, which is especially vital to employee socialization (Ostroff and Kozlowski, 1992). Nor has there been research investigating how sensation-seeking behaviors might influence the ultimate measures of workplace learning, i.e., technical and interpersonal job performance. It is quite conceivable, for instance, that highly sensation-seeking individuals might not be as motivated to acquire the necessary workplace knowledge, to "learn the ropes" of their jobs, if they find them to be boring and monotonous. This lack of learning might in turn negatively influence their job performance. Consequently, what happens when high sensation seekers have monotonous jobs or conversely when low sensation seekers have highly variable jobs? Anecdotal evidence suggests that they are less likely to "fit" into their organizations and that they are much more likely to perform poorly as they become highly dissatisfied. Yet there is no empirical evidence to support this observation.

Therefore, the purpose of this exploratory study was to focus on the sensation-seeking construct and how it might relate to the learning associated with the workplace socialization process and facets of job performance. The results could flesh out previously overlooked factors related to workplace learning and job performance, and contribute empirical support to theoretical possibilities regarding the relationship between sensation seeking and the workplace learning process. The identification and clarification of these relationships could provide human resource development professionals with useful ideas for facilitating workplace learning and enhancing job performance, absolute musts for a change-oriented organizational climate.

Research Questions

The research questions that guided this exploratory study were as follows:

1. What are the relationships among sensation seeking, workplace learning, and job performance?
2. Does sensation seeking influence workplace learning and job performance?
3. What influence does job satisfaction have on the relationship between sensation seeking and job performance?

Method

Participants The cross-sectional sample consisted of 81 women and 152 men. There were 11 females and 24 males who were 17 to 20 years old, 15 females and 62 males who were 21 to 29 years of age, 23 females and 37 males who were 30 to 39 years old, 23 females and 25 males who were 40 to 49 years old, and 9 females and 4 males who were 50 or older. The mean age of the sample was 32.5 years (SD = 8.8).

Most (86 percent) of the participants were Caucasian, 9 percent were African-American, 3 percent were Hispanic, and slightly more than 1 percent were Asian. Almost 64 percent of the subjects earned less than $30,000 per year; only 22 percent of the participants earned more than $40,000 annually. Approximately 62 percent of the sample had at least some college education. Overall, the typical participant was a male Caucasian under the age of 40, with some college education and an annual salary of less than $30,000 per year.

Procedure. Participants were obtained from four well-established, service-industry companies in the Washington, D.C., metropolitan area ($\underline{N}$ = 233). A battery of tests, of which the instruments examined in this study were a large part, and demographic data were collected at the participants' places of work, with an overall administration time of roughly 40 minutes. All instruments were paper-and-pencil questionnaires.

Instrumentation. One well-studied, self-report measure of the sensation-seeking construct with four relevant subscales was used in this study. The Sensation Seeking Scale--Form V (Zuckerman, 1979) consists of four 10-item subscales: boredom susceptibility, experience seeking, thrill- and adventure-seeking, and disinhibition. Subjects were asked to indicate whether they "liked" or "disliked" the activity described in each question. Cronbach's alphas of the subscales were .60, .49, .76, and .67, respectively.

The workplace learning (or "socialization-related learning") measure used was a modified version of the Workplace Adaptation Questionnaire (WAQ; Morton, 1993). This questionnaire was originally a 19-item introspective instrument. We supplemented the job-knowledge subscale with three additional items suggested by Morton's factor-analytic work to add more technically oriented questions to the instrument. For each question, participants were asked to rate their level of agreement ranging from 1 = strongly disagree to 5 = strongly agree. The first three subscales are concerned with assessing the socialization or learning process at work: establishing relationships (five items), acculturation (five items), and job knowledge (eight items), with corresponding alphas of .85., .86., and .96. The last subscale, satisfaction with learning experiences, is a quite different construct and is not included in the total instrument score. We used this four-item subscale as our operationalization of a kind of employee job satisfaction, that is, learning satisfaction. The internal consistency of the subscale was .81.

Last, the job performance instrument consisted of three two-item subscales (six 10-point Likert items overall). The three subscales assessed overall, technical, and interpersonal job performance. Internal consistencies were .66, .71, and .71, respectively.

Results

After examining the means and standard deviations for each of the measures (see Table 1), all of the research variables were intercorrelated and examined for interesting and meaningful relationships. Table 2 presents the total scale correlations.

Correlations between the variables and their respective standard deviations were entered into a structural modeling statistical package, EQS 5.4 for the Macintosh, and an a priori determined theoretical model (see Figure 1) was tested for statistical fit with the model.

Table 1
Descriptive Statistics for Measure Subscales

Scale	Subscale		M	SD	
WAQ	Job Knowledge		33.3	4.4	
WAQ	Acculturation		19.0	3.5	
WAQ	Establishing Relationships	21.2	3.0		
WAQ	Satisfaction With Learning Experiences		15.4	2.9	
SSS-V	Disinhibition		4.5	2.4	
SSS-V	Boredom Susceptibility		3.4	2.2	
SSS-V	Thrill and Adventure Seeking		6.2	2.7	
SSS-V	Experience Seeking		5.2	1.9	
TJP	Technical Job Performance			7.1	2.1
IJP	Interpersonal Job Performance		7.8	1.7	

Note. * N = 233

Table 2
Total Scale Intercorrelations

	SSS	WAQ	SLE	TJP	IJP
1	-----	**-.159**	**-.186**	**-.247**	**-.147**
2		-----	**.337**	**.448**	**.421**
3			-----	.093	**.286**
4				-----	**.467**
5					-----

Note. * N = 233; Bold-faced print $p < .01$
1 = SSS; 2 = WAQ, etc.

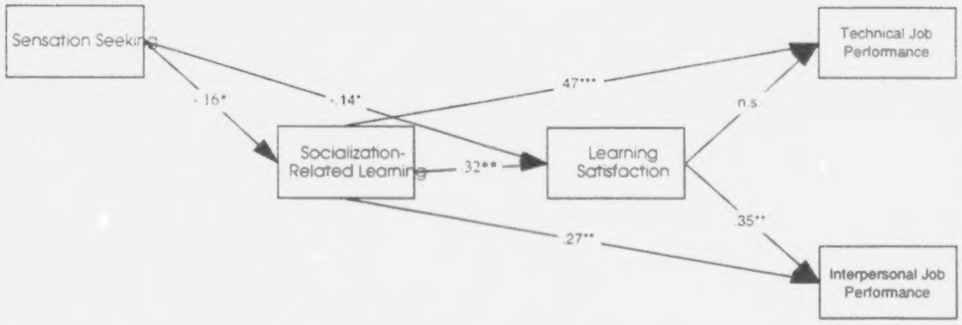
Sensation Seeking
- .16*
-.14*
.47***
Technical Job Performance
n.s
Socialization-Related Learning
.32**
Learning Satisfaction
.35**
.27**
Interpersonal Job Performance

Figure 1. Sensation Seeking to Job Performance Path Model

Conventional fit indexes indicated that the theoretical model fit the data adequately; therefore, the data did not disconfirm the model (Comparative Fit Index = .90; Bollen Fit Index = .90; and McDonald Fit Index = .96. Values of .90 or greater are desirable. See Kline [1998] for an excellent discussion of the various fit indices.)

All but one of the paths were at least statistically significant at the $p < .05$ level, most were significant at the $p < .01$ level. The satisfaction-with-learning-experiences to technical-job-performance path lacked statistical significance, yet we considered this result to be completely plausible when considering the composition of the learning satisfaction subscale. For instance, question 22, "I am satisfied with the support I have received on the job," does not seem to be as closely associated with technical job performance as it is with interpersonal job performance, especially considering our sample of service workers. Perhaps with technically oriented positions such as computer technicians, technical support would be perceived to be more valuable and thus technical job performance would be influenced more significantly. We recommend modifying the subscale to accommodate these observations.

Essentially, our path model lends empirical support to the notion that sensation seeking has a direct negative influence on socialization-related learning and satisfaction with learning experiences, and an indirect, positive effect on technical and interpersonal job performance, mediated alternatively through the socialization-related-learning and learning-satisfaction variables.

Discussion

Sensation seeking was explored as it related to socialization-related learning, job satisfaction, and technical and interpersonal job performance. As expected, sensation seeking had a direct and significant negative influence on the learning associated with the socialization process as well as on satisfaction with learning experiences (our operationalization of job satisfaction). This is in partial support of the van den Berg and Feij study conducted in the Netherlands. The negative relationship between sensation seeking and socialization-related learning was anticipated because when learning the nuances of one's position and the norms, values, and procedures of an organization, a certain amount of conformity is necessary. Certainly, high sensation seekers would not be as likely to prosper in typical service-oriented organizational situations demanding considerable structure and long-term conformity due to their constant need for stimulation. Indeed, the nature of any job would seem to mandate at least some constraint from one's supervisor, for instance, which would likely contribute to lower levels of job satisfaction for the high sensation seeker, and a resulting decline in their job performance. This assertion is supported by our theoretical model. In addition, high sensation-seeking individuals, while adept at handling novel contexts, would not as likely be stimulated and aroused sufficiently by such a learning context over the long periods of time necessary to accommodate fully to a position, the management staff, and an organization.

We have presented empirical evidence that the sensation-seeking personality trait has an important influence on the vital socialization process in which employees use various organizational resources, such as coworkers and supervisors, to learn the subtleties of their positions, and which ultimately influences their job performance. With this particular sample of service positions, high sensation seekers would not be as likely to be as well socialized or to fit into the organizations where the study was conducted, a development that would have a concomitant negative influence on their job performance because organizational policies and expectations would probably not encourage and foster such behaviors. Alternatively, with a sample of police officers, firefighters, and air traffic controllers, we might expect the opposite result: High sensation-seeking behaviors would be encouraged through organizational policies, the fit between the employee and the organization would be more assured, and job performance would be positively affected. Undoubtedly, more research is needed to investigate this possibility.

Human resource professionals should use this information carefully. Although a measure such as the Sensation Seeking Scale might be a predictor of organizational fit, job satisfaction, and job performance, these results are far too preliminary to advocate using this measure as a primary criterion for job selection. Far more interesting is the notion that this information could be used to help professionals facilitate and manage organizational learning, job performance, and employee retention.

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Searching for Meaning in Complex Action Learning Data: What Environments, Acts, and Words Reveal

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Analysis of complex action learning documents produced as course requirements in universities on three separate continents strengthens the credibility of relationship theories of mind and enactment theories of transformational learning. Words as data accompanying acts in real work settings, together with verbalized reflections upon these acts, weave a net to catch both organizational and individual meanings.

Keywords: Action Learning, Relational Thinking, Enactment of Learning

A number of qualitative studies have discovered a preponderance of positive outcomes for individuals who engage in action learning (Dilworth & Willis, 1997; Willis, Deans & Jones, 1998; Botham, 1997). With somewhat greater difficulty, researchers also seek to show positive impacts of action learning on organizational processes and outcomes (e.g., ARL™Inquiry, 1997). Action learning does not lend itself easily to results-oriented evaluation, but there is no longer any question that "change happens." The challenge for the researcher is to devise refinements in the ways change phenomena are described, for a better understanding of what is happening as it happens as well as what the wider implications may be.

Purposes of this study are 1) to capture data that suggest relational thinking presumed to be occurring at intersections between person and environments, and 2) to identify relationships, if any, between verbalized emotional changes and cognitive processing. The approach taken is qualitative, systemic, and psychological in orientation, using in particular a general system theory of Emotional Cognitive Structuring (ECS) that is relatively obscure and that has not entered the mainstream of HRD research. It acts in the service of personality development. While HRD has lately been drawn to a brand of social economic theory that seems largely supportive of performance technology, social psychology and personality theories relevant to adult learners seem to have waned in influence and may be in need of reconsideration to infuse new thought in the field.

An "intersection" of relational importance is a conceptual convenience, defined as the point in written reports from the U.K., Australia, and the U.S. where the action learner appears to cross boundaries either affectively or intellectually toward or away from any of three specific environments that are central in the reporting: the client organization (which may be the student's own work site), the action learning set, and the "intrapersonal space" in which the student struggles to internalize what is being learned. Relational thinking is defined as involving two or more relata ("both-and" matters of interest) and appears boundaryless in the sense that affect, intellect, and environments are not segregated. What we see at intersections may tell us something about how real or artificial it is to imagine that assessment of the impact of action learning on organizations can be made separately from the assessment of its impact on individuals.

Theoretical Framework

Relational thinking in its simplest form, considering two or more relata simultaneously, is axiomatic in general systems theory (GST). It has now become popularly symbolized as "systems thinking." A psychological example of relational thinking is embodied in William Gray's theory of Emotional Cognitive Structuring" (1973, 1975). Gray, a practicing psychiatrist and close friend of GST founder Ludwig von Bertlanffy, insisted that what we call thinking is a system, in which cognitions are always accompanied by emotional correlatives that are further differentiated or "nuanced" over time to lay the basis for restructuring of what we think. The theory may have unexamined relevance to the notion of "emotional intelligence," (Goleman, 1997), which is represented as developmental in nature.

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Another possible application is the recognition of individualism as an emotional-cognitive system nurturant that, rather than operating as a system antagonist, is essential to the forming of action learning communities.

In Gray's view, emotion is the "coder" or organizer of cognitive fragments. The fragments are "that which is organized." A cognition without emotion is not a thought and is easily recognizable by its "dead-endedness," Gray explained, for a cognition has no interest in going beyond itself (1975, I-5). It is his conception of emotion and cognitive elements as required parts of a "double helix" for thought production that is most pertinent to this study. It encourages the search for specific emotional coding that seems to engender thought in the action learning process.

Fundamental assumptions on which this study rests are that human brains work by integrated, relational processes rather than by chained or split-half processes, and that organizational "brains" work much the same way no matter how it may appear to outside observers. The theory that a "collective mind" exists in organizations is entertained at least provisionally by many organizational theorists, and Kirley (1999) has recently taken long steps through painstaking analogical discourse toward supporting the theory.

For the individual brain, learning is therefore assumed to be relational, and transformational to the extent that the learner recognizes emotionally nuanced events that "change everything." Learning for the collective mind of the organization is also assumed to be relational, and transformational to the extent that the whole organization or any critical mass within it "feels different." It is further assumed that the whole-brained organization will itself need to be consciously engaged in emotional cognitive structuring if it is to capitalize on human thought and learning. This structuring is unlikely to be susceptible to knowledge management, if its locus is a psychological or mind process. A final important assumption is that the words people use to describe their experiences in action learning *in the context of actions taken* can serve to illuminate both organizational and individual meanings either derived from the process or left unchanged by it. Enactment of learning that fully engages thought (not learning by doing) should provide optimal opportunity for transformation of individual and organization.

Problem Statement and Direction of Inquiry

Organizations can be said to "think" if the cognition is coded by emotion and is relational. If an organization thinks, it must be solely because individuals within it think, and do so in mutual, relational ways. Action learning is meant to change individual and organizational thought about self, others, and environments, as action and reflection proceed simultaneously.

Graduate students in several universities discover what action learning is by enacting their learning as part or all of their academic credentialing. At the Revans Centre in the U.K., graduate theses and dissertations literally determine success or failure in the achievement of a "degree by action learning." They entail three kinds of investigation and reporting, framed by these questions: 1) What did I achieve? 2) What did I learn? and 3) How might I apply my experiences in the future? In essence, student reports are inquiries into their own inquiry processes, which have included action research initiatives in their own or a client organization, collaborative inquiry in action learning sets, and independent reading, workshops and tutorials. In every case, the organizational environment is uppermost in student's minds, and the "what did I "and "how might I" questions are answered with difficulty because they require a much deeper level of relational thinking and analysis.

The University of Ballarat in Australia uses a different combination of structures and processes, seeking similar outcomes. After preparatory workshops, candidates for the Master of Business Management degree (MBM) must negotiate an operational contract with a client, then construct an associated learning contract with a project supervisor and an action learning set at the university. The degree is not earned until the work with the client, the work with the set, and the inner work of learning have been reported upon.

In the U.S., reports already sorted into a data base shared by Georgia State University and Virginia Commonwealth University contain similar process and personal learning information, as well as comments on the organization's acceptance of the findings from the action learning. These are not reports of thesis length, but have many of the same features, including reflections on personal learning and on the action learning process. The three sets of source materials have all been collected in English-speaking nations, and therefore are expected to capture only evidence of relational thinking as it has occurred in these language-linked nations. Anonymity of entries in the U.S. data base is contractually preserved, and though the theses from other countries are open records, the author's names and thesis page numbers have not been used in this article because of sensitivity to the personal nature of the material.

Research Protocol

The research examined texts that include six completed theses from the Revans Centre, one comprehensive report from the University of Ballarat, and sorted text data from the shared data base in the U.S. As is customary in qualitative research, definitive hypotheses were avoided to allow for emergent design as data was progressively examined and sorted. These were the major questions of interest, all keyed either to relational thinking and/or to emotional cognitive structuring. They are meant to help illuminate the research dialogue over personal vs. organizational impact of action learning *and* the reasonableness of making greater use of action learning as part of the HRD organizational change arsenal. "Environments" refers to the client organization, the action learning set, and the "intrapersonal space" of the learner.

1) Does data available suggest that action learners typically have two or more environments (as defined above) in mind during the action learning process or do learners maintain a singular focus?
2) What is the nature of the evidence in the data that relational thinking is or is not occurring? Are there clues to environmental boundarylessness present in the words, the acts, or both? Are environments depicted as alien from one another? Does there seem to be a lack of sharp demarcation between personal learning and organizational learning? Do learners believe that both are occurring simultaneously?
3) Do action learners report their learning as primarily affective, primarily cognitive, or as a mix that can be understood by researchers as emotional cognitive structuring? Does emotion seem to "code" cognition so that thinking/learning about self, others, and environments can be seen to have at least as high a priority as problem-solving ?
4) Does thinking appear to become more systemic? Do learners tend to see organizations as more systemic than they initially realized?

Because a major block of data has already been sorted by means of NUD-IST software, coding and card sort were thought sufficient for examining the remaining documents.

Findings, Interpretations, and Conclusions: Five Cases

Reporting of learning and change at the personal level, because of its potency, typically obscures the reporting of what the organization may have learned from person(s) in an action learning set. However, re-examining students' comments about their personal learning, particularly when juxtaposed with those passages where they are discussing either organization or action learning set activity, also shows that organizational learning is occurring.

Case One: Australian Report/Thesis

One example from a pair of text segments is drawn from the only Australian document examined. The first segment seems person-centered, but when analyzed with another entry, the segments together show organizational impact. The student undertook a Volunteer Enhancement Project to develop a strategic plan for attracting volunteers to staff the Ballarat Begonia Festival, to create a social program to keep them interested throughout the year, and to design a program of recognition and future career support. Reporting her actions, she says she was conscious of "rocking the boat" and taking personal risk as she moved forward with what the organization at first suspected was simply a project that met *her* needs. Initially they did not see "what was in it for them," and so she altered her strategies:

> I devised new solutions (changing the survey to focus groups, reporting directly to the Committee, sharing my thoughts and actions with the volunteer sub-committee, accepting the culture of the Festival management...)

Here, personal learning is apparent. She learns to "accept" rather than confront an organizational culture. She challenges her own thinking and revises actions. Later, she knows that what resulted from her project "has become a part of the fabric of the Ballarat Begonia Festival, a major tourist drawcard and contributor to the thriving community of the Ballarat region." Clearly the whole organization learned, and will do things differently in the future. Because she learned personally and reframed her own organizational effort, the involvement of volunteers in planning for a yearly tourist event that has a major economic impact on Ballarat and the region was institutionalized.

What is also striking in this case is a series of Johari windows depicting the evolution of openness and collaboration of the action learner with her client organization, her professor, and her university action learning set. The client organization series is of most interest here. At first, the window panes representing the open arena and the façade were very small. Although she "knew" the festival committee from her earlier work as a volunteer, she had had no opportunity to provide personal or working information about her project to the committee as a whole. In the very large pane called blind spot, she admits she did not "pick up on" reasons why her project was thought questionable and her methods unacceptable. The largest pane of all -- unknown-- is worth quoting also because it is redolent with emotion. In March she says:

> I did not know they would object to my proposed methodologies for gathering information from the volunteers. I didn't know that people I thought had been my friends and allies would question my motivations for the project. I didn't know how I would react to that.

By November, the unknown pane had shrunk to a simple and accepted fact: "The political nature of the committee leaves some unknowns remaining." In the interim, the emotional shocks she had encountered led to understanding that her real client was not an individual leader, but a committee of 10, a realization which then led to meeting with the whole committee to reach compromise.

At least tentatively, this appears to be a case of emotional cognitive structuring, over time, enabling personality development. But the finding least open to challenge in this case is that personal impact of learning shaded over into organizational learning and change.

Case Two: U.K. Thesis One

A professional trainer in the U.K. was providing management development opportunities for doctors in a National Health Services Trust. Engaged also in a master's program in action learning at the Revans Centre for Action Learning and Research, University of Salford, she soon found herself "questioning not only the efficacy of my efforts but the core of my approach to my work."

> Though I had kept abreast of changes in my profession and had progressed from "chalk and talk" as an Army instructor to more participative approaches, to "learning contracts," and had recently written a training and development strategy document in which we aspired to become a "learning organization," I had professionally, changed very little from my early years. Although...I "heard the words, I read the books, I debated the issues and at times thought I was genuinely involved," it was at this point that I understood that Action Learning offered opportunities for personal development that I could not only profit from personally but which I had a duty to exploit professionally. I turned to Revan's work to develop a personal understanding of Action Learning.

Ironically, just as she saw how action learning could help the managers she was working with and as she herself was "waking up to the power of learning in this way," this trainer saw that her professional world was turning "in a different direction entirely" toward competency-based training design. With her new insights, she concluded that

> These [approaches] seem to focus on external representations of ability without acknowledging the linkages between these and inner motivators...I have arrived at my reservations about competence approaches by way of two fundamental issues, context and ethics....Why has Action Learning been much more efficacious in my personal development than other developmental activities in which I have engaged?...The primary difference between this and other forms of learning lies in making explicit the attention which needs to be given to personal growth [as] a focus and not simply a by-product of learning.

She noted that the process had involved "upheaval of my innermost thoughts and feelings and recognizing linkages between these and the way in which I manage the tasks I perform."

Using this example may seem to be a deliberate ideological barrage to help make a case for action learning, implying that if one seasoned trainer "sees the light," then so should we all. But that is not the purpose of quoting this scholar-practitioner at length. Her story stands on its own as a clear description of transformational learning, which is for Mezirow "centrally concerned with the structure and process of construal, validity testing, and reorganization of meaning..." (1991, p. 7). Furthermore, it is obvious throughout the text that she has several environments in mind simultaneously, linking relata from each environment with relata from others. It is relational thinking she displays. Her profession begins to seem less systemic than she thought it was, and she discovers it to be a profession far less comfortable with emotion than she now believes it needs to be. She uses the term "feelings" instead of the word emotion, but what she writes is emotionally charged, produces new insights, and serves throughout her discourse as an exemplum of progressive emotional cognitive structuring. Differentiations of feeling (nuances) attach to newly appropriate (coded) bundles of cognitive fragments, as Gray would view the process. The connection between impact on her and impact on the organization through action learning is unclear. Although in the midst of her degree program she was downsized from her job, it appears circumstantially to be unrelated to action learning or what use she might have made of it in the health care setting. At first angry about the "redundancy," she began to think excitedly about doing independent consulting.

Case Three: U.K. Thesis Two

A speech and language therapist sought to help her organization expand and institutionalize the use of flex-time in providing health care. Other professionals in the group were chiropodists and physical therapists. She was aware that, although the personnel manager had given lip service to support her research mission, he neither aided her efforts nor took actions himself on the data she gathered. She had what she thought was a workable strategy: to further codify flex-time rules in her own department where there was a favorable climate, and then to inventory other groups so see whether there was support for flex-time in other areas of the organization. She felt that if she could help change the "internal mappings" so that other professionals perceived the advantages of new employment rules, then she would have succeeded in changing the organization's theory-in-use. If that occurred, she would be able to say that the organization "learned."

She wondered how direct the links are between learning and change, and during the project came to the conclusion that "Real and permanent changes in behavior must and can only come about when personal constructs are altered by the learning process." She could testify to the truth of this from her own experience in earning a degree by action learning. Nevertheless, she went through a lengthy process of trying to find other ways to test the reliability of her premise. She could ask subordinates, a spouse, other set members, or even an outside observer to determine whether she personally had learned and changed. But this still left possibilities for distortion. So in the end she decided that she had to trust herself. It was "reasonable to assume that learning would give rise to change, that the changes were attributable to action learning, and that someone would be able to observe these changes."

> Reflection on the new information generated by my actions...enabled me to repeatedly reassess and adjust my internally held models of the organization, my colleagues, and people and change in general...I believe I learned to increase my effectiveness in a changing world by recognizing the need for continual development (restructuring of myself)...resulting in altered constructs; changes in behavior are the end product.

She felt that the action learning set helped by "pushing me over the boundary between my current thinking and the acquisition of new ideas."

> The refusal of action learning to be neatly separated into a management development module, its propensity for overflowing out of a given project and into every aspect of work and personal life, demonstrated to me a major difference between learning and training.

Like learning to drive, she added, you have to *do* action learning, and you alter surroundings by "passing through" them. In her flow diagram of the process, this passing through is shown as learning made explicit through reflection.

She does not overestimate the impact of her work on the organization, given the fact that the physical therapists and the personnel director shared the perception that strict nine to five hours were more professional and were unrelated to the professional recruitment problem the organization was experiencing.

But she did establish new procedures in her own department and also found strong support for similar changes among the chiropodists. While personal impacts of action learning did not map over the whole territory of the organization, they seem to have bled out over large segments of it, and certainly into the lives of those with whom she worked most closely.

In this example there are explicit references to relational, boundaryless thinking and to emotional cognitive structuring in the way her thinking evolved. She does not say that emotions led directly to insights that fuel new thinking, but the "restructuring of self" idea carries that implication.

Case Four: U.K. Thesis Three

In this example, limited text is sufficiently revealing. A director of mental health service development for a National Health Trust region discovered that "managing without shoes" is a confusing but heady experience. He was challenged to develop new forms and venues for mental health service delivery in partnership with users of such services. For him, becoming less of a bureaucrat and more of an entrepreneur was a professional sea change:

> I thought I involved people who use our services when I was a service manager, but the experience of developing this project [the creation of an innovative, multi-purpose Creative Learning Center] confirmed to me that this is not the case. They would often be consulted after a decision had been made.

As he devised new ways to work with these consumers, his respect for them grew. He called it learning the art of managing without shoes not only because he was asked to remove his shoes at his first meeting with them, but also because he came to see this as a metaphor "that reflects how uncomfortable and vulnerable I have felt as I encountered a range of new experiences." He will continue to build other partnerships as the project progresses toward implementation.

The person-centered approach to patient care makes deliberate use of a social model, rather than a medical one. This represents an organizational sea change for a national health care entity that is still in the throes of decentralization and reorientation toward the communities served. The executive director of the Trust who chose the new development officer sees the transformation of his subordinate this way:

> S. is now clearly the same person with the same values and drive and with an intense commitment. However, he has learned to risk himself in a context which has few of the familiar handholds and which is rich in its novelty and uncertainty. He has done this is a way which has become increasingly self-confident and self-aware. He has become more reflective, but in doing so, has learned to use his reflection to digest and integrate his experiences and move forward. It is a creative and enabling process. The effect of this is that his enthusiasm and drive is now addressed not just to achieving objectives, but also to engaging others and to grappling with concepts and ideas....I have always valued S. and his contribution, but I have been fascinated by the way his vision and style have opened and skills developed.

In an interview I conducted with S. after his submission of thesis, he bluntly acknowledged that he had been forced by his job circumstances to change, that the action learning had helped him accomplish this, and that being a changed man is transformative in more ways that he had ever thought possible. He spends a lot of time just "hearing what people say." To conclude that he has no effect on the organization that sponsored his action learning or on the community in which he now spends much of his time would be disingenuous. That he has had to engage in relational thinking and has used his own uncomfortable emotions to restructure his thinking is also a justifiable conclusion.

Case Five: U.S. Reflection Paper

The fifth and last example is from a reflection paper written by a student in the U.S. after an intensive summer experience with action learning in the U.K. The student was one of 30 from different countries who were sorted by diversity into five action learning sets of six people each, and assigned to work with managers from two hospitals in the Manchester area that were facing the difficulties of a merger. Data from this event make up a large part of the shared U.S. data base on action learning and some of the findings have been reported earlier (Dilworth & Willis, 1997; Willis & Dilworth, 1998). Each set worked with their assigned manager as a team, having periodic consultations with the manager during the two-week intervention.

This was a different structure for action learning than was provided in any of the previous examples, where each thesis writer worked independently with the client group and then touched bases with a university-based action learning set to share concerns and gain new insights about their work. The U.S. author describes the process her set used to learn about the client manager's problem in this way:

> We delved into many different perspectives concentrating on the internal and external customers, politics, budgets, cultures (formal and informal), traditions, communication strategies, technology, reward structures, and the mission and value statements of the hospitals...We found that "reading between the lines" was a necessity, even though hospital representatives were honest and straightforward. We... [looked] for implications and values that may not have been evident to those involved....
>
> The problem focus as it was presented to us was laden with systemic disconnects. We decided to break it down to foundational, relational segments, and asked questions relating to these disconnects...It was stressful because we each saw and heard different things even though we

> were all at the same meetings…Our "filters" were on and colored our line of reasoning, which was good because we had multiple perspectives. The stress was the result of debating and challenging issues that had meaning for us.

The narrator then speaks of "overreacting" to an offhand comment by one of the set members that appeared to be disrespectful of other members of the group and their efforts. Because she was "not confrontational" by nature, it was "difficult" for her to say "what I thought on the spot," but she did so and this was clearly a defining moment for her, discussed at length in her paper. Subsequent comments included these which are especially relevant to this study:

> It was interesting to participate and observe the things that changed and the things that seemed to remain constant…I thought about what I brought to the set …My worry was that I didn't see my own strengths and weaknesses clearly…There wasn't a lot of time to take a challenge and reframe one's perspective, or "unfreeze." It takes a person a long time to develop perspectives… I think there were quite a few of us that pushed our boundaries. Collectively we pushed through some difficult times. I think we gave a quality analysis and provided fresh questions.

This example of a reflection paper that did not attempt either length or the detailed follow-up of the two-week intervention does not and cannot be expected to reflect the same richness and contextual detail that a two-year engagement with action learning and thesis writing must. However, there are clear indications from the set member quoted that the set engaged in relational thinking, adjusted and nuanced emotions that subsequently organized or coded cognitive fragments floating in the set, as voiced by multiple perspectives. The primary "environments" in this case appear to be other "intrapersonal spaces," at least for this participant. The environment of the client organization ran second. In essence, the set delivered a product --a quality analysis and some fresh questions. There is no indication from this writer that the organization learned or was transformed in any way (though other reports in the data base do give such indications). Finding items in written materials that can be assessed in terms of organizational change in thinking and learning seems to be partly conditioned by duration of contact with action learning that the writers have --not neccesarily in clock hours but through a passage of time. But finding such items may also be conditioned by the significance episodes have for a particular learner at the point of writing about experiences. Perhaps when emotions are in what Gray calls "global" or "primary color" mode, and not yet differentiated, the cognitive fragments they code are more intrapersonal than organizational.

Recommendations for HRD

Though the examples are limited, they may taken together provide incentive for further investigation along the lines laid out in this research. It is almost impossible to read such narratives separated in time, by culture, and by distance, yet finding the same elements over and over, and not become convinced that action learning is a strategic force for human resource development. There is also evidence that the writers quoted here, in all likelihood unknown to each other and never having worked together, experience much the same sort of restructuring of what they think and what they subsequently act upon once they engage in action learning. Relational, systemic thinking and emotional coding appear to be demanded by action learning, and it may be that these imperatives override many cultural differences. It may even be the case that non-western cultures more easily use these non-linear kinds of processes than westerners do. Research possibilities seem endless, and this is admittedly a very small beginning.

In regard to the four questions of interest, there does appear to be support for believing that action learners rarely if ever maintain a unitary focus. They are not "hung up" on any of the three environments exclusively. Relational thinking is, if not engendered by the process at least compatible with it. Students begin to look for systemic connections both in the client organization and the set, and generally in themselves as well. The "alien" appearance of environments (self, others, client organizations) tends to fade as interactions occur and expand. Learners are aware of this, although they still tend to mark off areas of personal learning from areas of organizational learning. One possibility that occurs to me as a result of this study is that students should be guided themselves to seek out juxtapositions of self/organization change, adding a specific section on organizational learning to their theses and project reports. It may be that students tend to discount the learning of the organization because what they have learned themselves is so remarkable.

Feeling statements are made; students are aware of their own and others' emotions in the course of the work. They reflect and organize and refine their view of what occurs and the role they play in it. At least metaphorically, emotional cognitive structuring seems to be happening and for some it is transformational.

There are specific initiatives that this study indicates HRD should be taking, enumerated as needs or directions below:

- ***HRD needs to find ways to factor emotion into organizational and individual learning.***

The role of emotion in human resource development is insufficiently addressed in the research and practice literature in the field. Except for certain types of OD interventions, the relationship between emotion and cognition does not seem to be a comfortable arena for discussion. It is like working with one half of a double helix. In Johari window terms, it may be a crucial "blind spot" in HRD reckoning to leave the emotion in learning to chance or to suppress it in favor of observable performance. If organizations continue to seal off the emotional development of persons from the work environment, giving "feeling" a nod in terms of the rituals and celebrations of culture but not in terms of personality development and growing psychological efficacy, then new cognitive structure may not appear as rapidly as needed.

Gray asked that we aim for "new neuronal networks" [dendrite branching and relational brain activity], which he believed new emotional cognitive structuring (ECS) to be. A person cannot learn without producing change in neuronal networks. The goal for Gray is the self-organization of personality, progressing from simple to higher order affects, which in turn (as one thesis writer said) changes thinking and has enormous influence on how tasks are performed.

- ***HRD needs to take action learning more seriously and honor it distinctiveness.***
  Action learners with very little practice seem remarkably adept at finding and sorting their emotional nuances into appropriate "bins" or schemas. First, however, they need to be made aware that this can and should happen if they are interested in personal development and confidence/ capacity building. They may even need to consider the possibility that what they think is organized by their emotional coding, and that it is handicapping to believe otherwise. Conceding that emotion has a role and giving it legitimacy through action learning is a quick start, if not a quick fix. Relational thinking and emotional integrating, while a long term proposition for individual and organization alike, cannot even begin unless there is a way to make an initial investment.
- ***Even as HRD practitioners come to realize that culture makes a difference in how we proceed, there is a growing need to understand that emotion and thought are common to all cultures.***
  It may be that emotion codes differently for different people, but that it really does code how we act and think may be an insight we are in danger of losing in our struggle to find "mechanisms" to use cross-culturally.
- ***Systems thinking, now become almost a mantra of organizational learning theorists, needs to be recognized by HRD as a deeply personal and relational matter.***
  It is multi-directional, permutational, and not a "flow-chart of the mind." Thinking happens in persons as well as organizations and does not proceed either in straight lines or inside lines. It does not emerge by cookie-cutter but idiosyncratically.
- ***Finally, HRD may do well to take a deeper interest in the nature of and conflicts in its own philosophies and its own paths to perspective transformation.***
  We can hardly encourage others to differentiate and change and learn if we cannot do the same for ourselves.

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Employee Strategies in Organizing Action Learning Programs

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Existing action learning approaches pay relatively little attention to the strategies of employees (compared to those of learning coaches) and tend to ignore the impact of different work contexts on learning. This study addresses the various ways in which employees organize their own action learning programs in different work contexts. A theoretical framework for the organization of action learning projects is presented, which introduces core activities to be undertaken in an orientation, learning, and continuation phase. Four learning-project cases from different work contexts are analyzed using this framework. It is concluded that employees have their own strategies to organize action learning programs. Moreover, there are several ways in which they organize these learning projects. The work context is found to be an important factor to explain differences among learning programs.

Keywords: Action Learning, Employee Directed Learning, Organizational Learning

Action learning is widely regarded as an effective HRD intervention (Inglis, 1994; McGill & Beaty, 1992). Yorks, O'Neil & Marsick (1999, p. 3) define action learning as "an approach to working with and developing people that uses work on an actual project or problem as the way to learn. Participants work in small groups to take action to solve their problem and learn how to learn from that action. Often a learning coach works with the group in order to help the members learn how to balance their work with the learning from that work."

This definition emphasizes learning by solving real-life work problems in groups. Although an action learning approach seems suited for all kinds of employees, it is often associated with management learning and development (Mumford, 1997; Revans, 1980; Watkins & Brooks, 1994). This raises the question whether employees cannot also learn by solving real-life work problems in groups. Moreover, the definition stresses the role of a learning coach in helping group members learn from their work. This raises the question whether employees cannot also organize group learning by themselves, without the help of a coach.

O'Neil & Dilworth (1999, p. 20) list a number of considerations that have to be addressed in designing action learning programs:

- Work on a familiar or unfamiliar problem?
- Learn in a familiar or unfamiliar setting?
- Define an individual or a group project?
- How to choose participants?
- How much time investment is feasible?
- Should learning content be provided, and if so, what and how?

These basic design issues are important ones to cover, because the answer to the questions will impact the specific type of action learning program that is organized. The HRD profession knows a lot about the strategies that course designers should employ in order to make training programs effective. However, when it comes to more informal ways of learning on the job, effective strategies of employees (and their managers) require much more emphasis. Unfortunately, HRD knowledge in this domain is still quite limited.

Theoretical Framework

Poell & Van der Krogt (in press) present an approach to organizing work-related learning programs, which puts employee strategies at the focus of attention. All employees are considered to be every-day learners, though to a large extent unconsciously, in that they find ways to deal with the problems they face in doing and improving their work. For example, they seek support from colleagues or team leaders, they experiment, they call upon experts, or they engage in trial-and-error problem solving.

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Employees can consciously make their learning and work improvement efforts more explicit and systematic by defining it in terms of a learning project, individually or group based. Poell (1998) demonstrated that employees may or may not need support from a learning coach in organizing their learning project. One reason why they would choose not to call upon advisers or managers for assistance is that their strategies to organize learning projects may differ significantly, as Poell, Van der Krogt and Wildemeersch (1999) have shown.

One reason why they would choose such support is that different strategies are not necessarily detrimental to employee learning and work improvement. It is important for employees and other learning project members, however, to be aware of differences in learning views, work views, and the various strategies associated with those views. Most importantly, though, employees use strategies of their own in organizing learning programs (Poell, 1998).

On the basis of these viewpoints, Poell & Van der Krogt (in press) present a method of organizing action learning programs that seek to combine elements of every-day learning, individual self-directed learning, group learning, and facilitator-directed learning activities. The method comprises three main phases: orientation, learning, and continuation. The orientation phase enables employees to make the transition from every-day learning to the action learning program, whilst the continuation phase serves to incorporate lessons learned during the core phase in their every-day learning efforts within the organization.

Orientation Phase. This first phase brings employees from an initial idea of learning something new to a group learning contract. There are four essential activities during the first phase: mobilizing the participants, analyzing the learning theme, putting the learning program into context, and making a learning contract.

Mobilizing the Participants. Individual members and the participants as a group reflect on their learning needs and how their participation in a learning project could contribute to fulfilling these needs. Group members make arrangements regarding their own tasks and support needed from others.

Analyzing the Learning Theme. Participants analyze their work problems and the developments in the organization that have led to these problems. The analysis results in a broad program of learning activities to be undertaken and the learning objectives to be met.

Putting the Learning Program into Context. As the learning program will not take place in a vacuum, the opportunities offered by the existing learning system have to be taken into account. Which elements in the current learning facilities can be used, and what additions to it need to be made during the project? Gaining commitment and facilities from significant actors around the learning project is a crucial activity here.

Making a Learning Contract. The outcome of all these activities is a (psychological) learning contract, which contains an agreement about the commitment of those concerned, the content and organization of the learning project, and its relationship to the existing learning system. The contract is an explicit expression of the ideas and possibilities of the employees, managers, and coaches involved in the learning program.

Learning Phase. This second, and core, phase ranges from the finalization of the learning contract to the attainment of learning outcomes. This is where the actual learning program is created and performed, supported by processes of coordination and guidance. At the same time the learning program is optimized, constantly tuned to changing viewpoints regarding learning and work in those involved, and continually geared to the relevant developments in the work.

Creating the Learning Program. The agreements and ideas from the orientation phase are now put into practice. Three core activities are performed at this stage. *1) Learning in Learning Situations.* Participants engage in learning activities together, reflect upon their progress, and thus develop their expertise and action repertoire. Some examples of possible learning activities include work experiments, giving each other feedback, playing a simulation game, discussing new ideas, participating in on-the-job training. *2) Learning-Program Coordination.* The learning project comprises various different activities, which have to be coordinated in order to make up a coherent program. Participants extract lessons from previous activities and translate them into the next activity to be undertaken within the program as a whole. *3) Learning-Program Guidance.* Individual set members and the group as a whole usually need guidance to help them create a meaningful learning program. This activity encompasses making participants aware of available options within the learning project, painting scenarios for these various alternatives, and helping members to make the best choice from possible activities.

Optimizing the Learning Program. The ongoing optimization process is closely related to program creation and runs concurrently with it. It addresses three central issues. *1) Tuning to Learning Views.* Throughout the project, participants ask themselves whether the learning program is still consistent with their views on what they should learn and how it should been learned. Discrepancies are discussed and, if possible, resolved by adapting the learning activities to these views. *2) Tuning to Work Views.* Similarly, set members reflect on the question to what extent the learning program is still tuned to their views of an optimal work organization and content. If needed, other types of learning activities are added. *3) Relevance for Work.* Participants make sure that their learning activities contribute to solving their work problems. Should this not be the case, then work developments are reanalyzed. If unforeseen work problems arise during the project, learning activities are redirected in order to tackle them as part of the program.

Continuation Phase. This third and final phase takes employees from the initial learning outcomes to a lasting effect. On the basis of the lessons learned during the program, employees are enabled to resume their individual every-day learning paths. These lessons are also translated to the organizational level in order to improve the corporate learning system.

Resuming Individual Learning Paths. Set members are encouraged to build upon their initial learning outcomes. They alter their personal development plan in order to incorporate and expand the lessons learned during the learning project, both in terms of what they have learned and how they have learned it. Subsequent every-day learning and work improvement activities of the participants are impacted by these reflections.

Improving the Organizational Learning System. The organization can also learn from the experiences gained during the learning project. This can be achieved by participants communicating and collaborating with other people in the corporate learning system, for example, by having them as a member or coach in a new learning set. Another possibility is to systematize the learning materials that came out of the project. Finally, the implicit knowledge that members have gained about organizing and optimizing the learning program can be made explicit through interviews, surveys, a project journal, or minutes of set meetings.

Problem Statement and Research Questions

There is some empirical research to indicate that action learning programs can be organized in various different ways. Poell, Van der Krogt and Wildemeersch (1999) used four theoretical types of learning projects in order to study the differences among sixteen learning-project cases. Three clusters of learning projects emerged, which were labeled as: 'Extended Training', 'Directed Reflection', and 'Reflective Innovation'. Apparently, employees have several options in organizing their own learning programs.

Furthermore, the work context seems to be an important condition under which learning is organized (Torraco, 1999). Van der Krogt (1998) investigated the relationship between corporate learning systems and the organization of work. He found that certain types of corporate learning systems are more likely to be found in corresponding work systems. A contractual or 'liberal' learning system is related to individual work, whereas a regulated or 'vertical' learning system is more likely to occur in task work. An egalitarian or 'horizontal' learning system is connected to group work, whilst an innovative or 'external' learning system is characteristic of professional work (cf. Table 1; Mintzberg, 1979). Poell, Van der Krogt and Wildemeersch (1999) also concluded that certain types of learning projects are more likely to be found in certain work types. In short, the work context appears to be a crucial factor in explaining which type of learning project employees will organize. We will use the expected relationships between work and learning to interpret and typify the action learning programs described in this study.

Table 1.
The relationship between work and learning systems.

	Type Of Learning System			
Work Type	Contractual, 'Liberal'	Regulated, 'Vertical'	Egalitarian, 'Horizontal'	Innovative, 'External'
Individual Work	X			
Task Work		X		
Group Work			X	
Professional Work				X

The present study intends to demonstrate the various ways in which employees organize action learning programs related to their work context. Working on the basis of the action learning method described above, it aims to develop a number of different ways in which employees, managers and learning coaches can systematize the every-day learning and work improvement efforts of employees.

The following **research questions** will be investigated:

1. Which activities are undertaken in the orientation, learning and continuation phases of action learning programs? And which ones of those activities are conducted by employees?

2. Are there any differences in the way action learning programs are organized? And, if yes, are these related to the work context (as presented in Table 1)?

Methodology

A secondary analysis of existing learning-project material was performed, including interview summaries and learning-project documents (Poell, 1998). Four cases of work-related learning projects conducted by employees were selected on the basis of different work types in which they were carried out. Four different work types - task, individual, professional and group work - were included in order to maximize the possible variation in learning programs (in view of our second research question). Poell (1998) gives a more elaborate account of the methodology used to study these cases.

Interview summaries corrected by interviewees were used to describe the activities of employees, managers and learning coaches in the various sub-categories of the orientation, learning, and continuation phases of each learning project. An effort was made to increase inter-rater reliability by having two researchers discuss the learning-project descriptions for consistency. Cases were re-analyzed with a focus on employee strategies in preparing, performing and concluding their learning project (in view of our first research question).

Results

Case A. This learning project takes place in an organization referred to as 'Factory', which is characterized by task work. The learning program is conducted by process operators who aim at making the work processes more transparent.

Orientation Phase. Management takes the initiative to start an improvement team, because material wastage is perceived to be excessive. Earlier attempts by management to deal with this problem in a top-down fashion were not successful. A team leader is appointed, who invites a facilitator and seven operators from all five shifts to join on a voluntary basis. The team adopts the problem statement and objectives of their management and decides to focus on clarifying the organization of work processes in the factory. Team members arrange to meet for two hours every week and to work in small groups in between. Commitment from other shift workers is sought by regular two-way communication about improvement activities and other ideas.

Learning Phase. A specific problem-solving method geared to operator use is taken as a guideline to coordinate team learning activities. The facilitator guides the operators through applying this method to their specific problem. Assignments are issued, carried out in subgroups, and evaluated in plenary team sessions. Learning activities include holding a survey among fellow operators, paying a working visit to a similar factory, inviting process experts for a lecture, experimenting with incremental changes to the work process, instructing their own shift members, improvising, and introducing broader changes to shifts. Few optimization efforts are made during the learning project. The problem-solving method is applied in a linear fashion, but it provides ample opportunities for the operators to tune the activities to their own views on work and learning.

Continuation Phase. The operators have gained a lot of experience with a structured problem-solving method, which they can apply in their daily work and in further learning projects. Management has learned that an improvement team brings about more changes and benefits than any of the top-down approaches they have tried before. In that sense, the organizational learning system has been enriched.

Type of Learning Program. This case can be labeled as a well-performed, systematic vertical learning project. The strategy of direct representation of employees in organizing work improvement activities allowed the participants to optimize a regulated learning system.

Case B. This learning project is organized in a night school labeled 'College', which represents individual work. A group of liberal arts teachers carries out a learning program around the theme of "Guiding students who learn independently".

Orientation Phase. School management takes the initiative to have an external advisor hold a learning needs survey among the teachers. Several learning themes emerge from this exercise, one of which is student independent learning. Teachers are asked to join a learning group around this theme on a voluntary basis. A small group starts by discussing the specific outcomes of the survey and translating them into ideas for the learning program. One of the teachers starts having regular meetings with the external advisor in order to inspire the learning set and evaluate its progress. They also use survey results about the college learning facilities and teacher views on their own learning and work situation. School management is very interested in the outcomes of this learning group but leaves it up to the teachers themselves to organize it.

Learning Phase. Coordination of the learning activities rests with the five group members and is largely interest driven. During the project, the external advisor suggests possible learning activities to the group via one member. The teachers start by discussing their own classroom practices on the basis of one of the classes recorded on videotape. In a second meeting, one of the teachers presents his experiences in using the open learning center at a different college. They read and discuss journal articles together. Some group members attend each other's classes and give feedback to one another. They support each other doing individual classroom experiments with students' independent learning. Some of the insights gained in the project are used in a newly introduced teaching method. One group session, which turns out to be the final one, is spent listing the consequences of independent student learning to exam regulations. Although the teachers have every freedom to carry on organizing the project, they cannot find a way to make the group activities more concrete and meaningful to their work situation. Hence, the project runs down.

Continuation Phase. Although the project peters out in the end, individual members have experienced new ways of learning together with their colleagues. School management has learned that teachers are willing to organize their own learning projects. Some lessons from the group project have been used for organizational changes. On the other hand, there is also a sense that the project could have produced more concrete output if better arrangements had been made.

Type of Learning Program. This case represents a rather unsystematic liberal learning project, characterized by a lack of coherence in its arrangements among the participants, and a lack of reflection on learning activities as the program is carried out. The group of individual teachers is too loosely organized and does not actively seek opportunities to bring more focus to their joint activities.

Case C. *Case C* occurs in an organization called 'Hospital', where professional work is found. Medical doctors organize a learning project with the specific aim of developing a new medical treatment.

Orientation Phase. A group of medical doctors take the initiative to prepare for the introduction of a new treatment. They invite a nurse and a number of technicians to join the project group. Every individual member's expertise is needed to make the new treatment a success. The participants study the scarce body of literature about the treatment. They also pay a working visit to a specialized clinic abroad and bring home the material needed to perform the treatment. The hospital management lends financial support to the project group and does not interfere otherwise. The project is considered useful to raise the hospital's national profile.

Learning Phase. Initially, experimental treatments are performed on sheep. The problems that arise are solved partly by self-study, partly by group evaluation sessions. The treatment is optimized a number of times before it is finally performed on patients. The first results of the new working method are discussed with fellow medics at a special conference and in scientific journals. More experiments gradually lead to standardization of the treatment protocol. Doctors who were not part of the initial project group now learn the new treatment from performing it 'at the bed' with a more experienced colleague. The whole learning program is organized on the basis of continuous adaptation to newly developed insights along the way. However, the participants methodically work their way towards establishing a standardized treatment protocol and use the professional expertise of their fellow medics to this end. After all, they have chosen to work on the cutting edge of medical expertise in their discipline.

Continuation Phase. The participants resume their every-day learning efforts having experienced the benefits of multidisciplinary collaboration during the learning project. Thus, this professional organization has integrated elements of multidisciplinary group learning into its profession-based innovative learning system.

Type of Learning Program. This case can be referred to as a systematic and well-performed external learning project. Besides a strategy of professional innovation, the way in which the doctors develop a new working method displays horizontal characteristics as well, in that they learn constantly from their learning-project experiences and keep adapting the course of the learning program accordingly.

Case D. This learning program takes place in an organizational 'Consultancy', characterized by group work. A number of consultants undertake a learning project aimed at applying the concept of the learning organization commercially.

Orientation Phase. The program starts when one of the consultants, after a presentation on 'The Learning Organization', is asked by her colleagues to "do something more around this topic". This is a largely spontaneous initiative. Having established a basic level of commitment, she invites those interested to attend a start-up workshop. She presents some possible ways forward to the members, which are discussed by the group and turned into an optional activity list. All participants decide to work on integrating possible activities into their regular consultancy projects, but this is not really made into a group effort.

Learning Phase. A further plenary meeting is held to discuss the literature on learning organizations and grasp the basic tenets of the concept. Participants also discuss their own viewpoints on the topic and the way they might use it in their own practice. Two of them team up to develop a learning organization questionnaire, which is initially used to diagnose their own company. Two others combine forces to reflect on the way in which they have used the concept in a real-life consultancy case. These sub-group activities are next discussed in a plenary session. Individual members are very much in charge of their own learning process and, although they decide to work together in teams for the remainder of the project, in fact the program runs down from this moment on. Most participants report the learning organization concept offers few concrete opportunities for commercial application, even if some of them have succeeded in gaining benefit from their individual activities.

Table 2.
Four cases of action learning programs, in four organizations characterized by different work types.

	Case A: 'Factory'	**Case B: 'College'**	**Case C: 'Hospital'**	**Case D: 'Consultancy'**
Participants, **Work Type**, *Learning Theme*	Process operators, **Task** work, *"Making work processes more transparent"*	Liberal arts teachers, **Individual** work, *"Guiding students who learn independently"*	Medical doctors, **Professional** work, *"Developing a new medical treatment"*	Training consultants, **Group** work, *"Applying the learning organization concept commercially"*
ORIENTATION PHASE				
Mobilizing the Participants	Initiative of management; team leader creates operator team with facilitator	Initiative of school management; external advisor holds survey; teachers participate voluntarily	Initiative of medics; nurse and technicians invited to join preparation group	Spontaneous initiative after presentation of one member; those interested encouraged to participate
Analyzing the Learning Theme	Group adopt management's problem and goal statement	Preparation group of teachers discuss survey outcomes and implications	Study literature; working visit to specialized clinic; bring materials	Key member discusses her ideas about possible activities with others
Putting the Learning Program into Context	Improvement team in attempt to overcome top-down failure; operators actively represent each shift	Management gives group free rein; advisor suggests possible activities via one group member	Hospital management provides financial resources; medics have autonomy to develop new treatments	Project not really embedded in every-day learning and work; individual members relate it to their situation
Making a Learning Contract	Weekly meetings supplemented by small-group work	Remains largely implicit (except for regular meetings with advisor)	Each member's expertise is needed, and called upon, for success	Remains mostly implicit (except for optional activities listed in minutes)
LEARNING PHASE				
Creating the Learning Program				
Learning in Learning Situations	Survey among shifts; working visits; sub-group assignments; expert lectures; experiments; shifts instruction; improvising	Video-based discussion about own practice; exchange open-learning experience; read articles; visit each other's classes; list implications	Experimental treatments on sheep; group evaluation and self-study; optimization; publications and conference; gradual standardization	Discuss literature and participant views on 'learning organization'; two members develop questionnaire; two discuss own practice; group feedback
Learning-Program Coordination	Facilitator directs group through problem-solving method	By group, based on individual interest; advisor makes suggestions	Continuous methodical adaptation by medics to insights gained under way	Limited coordination after start; idea to work in sub-groups
Learning-Program Guidance	Facilitator monitors linear application of problem-solving method	One teacher discusses options with advisor; group members choose activities	No specific guidance except via joint work towards standardized treatment and via professional consultation	None, individual members guide themselves through their own learning program
Optimizing the Learning Program				
Tuning to Learning Views	Method is geared to operator use	Teachers take main decisions about learning activities	Group decide about learning activities to be undertaken	Consultants choose whichever activities suit their needs and views
Tuning to Work Views	Method helps operators to invent and implement concrete improvements	Teachers take main decisions about individual work improvement	Continuous adaptation to developing work views forms core of project	Consultants translate new insights gained to their own work practice
Relevance for Work	Method helps operators tackle work problems that they experience	All teachers deem learning theme relevant to their own work practice	Project on cutting edge of medical technology, as initiated by medics	Most members find core concept too remote from commercial application
CONTINUATION PHASE				

Resuming Individual Learning Paths	Operators have learned to use problem-solving method	Teachers have experienced learning in a group of colleagues	Medics return to 'normal learning' after benefiting from group effort	Every-day learning efforts have hardly changed during the project
Improving Organizational Learning System	Learning system enriched by use of improvement-team approach	Organization has witnessed self-directed learning of teachers	Department has integrated multi-disciplinary work into an innovation	Company has found out that this way of teaming up proves ineffective
TYPE OF LEARNING PROGRAM	Vertical, well performed, systematic (optimized regulated program)	Liberal, rather unsystematic (lack of arrangements and process reflection)	External, well performed, systematic (with also some horizontal features)	Horizontal, rather unsystematic (lack of group effort; some liberal features)

Continuation Phase. Since nothing much has changed in the way the consultants learn, they resume their normal learning path with a vague sense that the learning program could have been a lot more successful. The organization as a whole has experienced that this particular approach is rather ineffective and probably not the best way to go forward, although they cannot quite put their finger on where exactly things have gone astray.

Type of Learning Program. This case is an example of a hardly systematic horizontal learning project, which is characterized by a lack of commonality among its members. There appear also some elements of a rather unsystematic liberal learning project, in the lack of mutual engagement that is enforced among the participants.

Table 2 gives an overview of the key elements in these four action learning projects.

Conclusions and Discussion

To answer the first research question, most of the activities that were conducted in organizing these four action learning programs focused heavily on the core learning phase, especially on carrying out the learning program. Fewer activities were undertaken in the orientation and continuation phases, and in the optimization process within the core learning phase. In all four cases, however, employees conducted many of the central learning activities themselves, either supported, facilitated, or directed by a learning coach or a manager.

To answer the second research question, differences were found among the four action learning programs in terms of most activities that the participants conducted. The three main phases (orientation, learning, and continuation) were organized differently across all four cases. There appears to be a relationship between the type of action learning program and the organization of work in this sample. The vertical learning project (case A) and the external learning project {case C), which were performed very systematically, are highly contingent with their contexts of task work and professional work, respectively (cf. Table 1). The liberal learning project (case B) and the horizontal learning project (case D), if conducted less systematically, are also largely contingent with their contexts of individual work and group work, respectively.

It is concluded that employees have their own strategies to organize action learning programs. Moreover, there are several ways in which they organize these learning projects. The work context is found to be an important factor to explain differences among learning programs (Torraco, 1999). It seems that, to a large extent, the same organizing principles governing specific work contexts apply to the creation of work-related learning programs by employees. Systematically taking into account the every-day learning and work improvement efforts of employees can make action-learning programs better suited to their situation before and after a specific program (which is why the orientation and continuation phases are so crucial). These every-day activities should be made more explicit and systematic, throughout the duration of the learning project (which is why optimization should be an ongoing concern). However, too much formalization of a learning program may be counter-productive, for there is a risk of losing the intrinsic benefits of informal learning and work improvement efforts. Therefore, employees should be co-organizers in all phases of learning-program creation. Learning coaches and managers should help them organize the relevant connections between every-day learning and work improvement efforts and their more systematic learning-project activities. Poell and Van der Krogt (in press) present a number of different models, which can be used to this end.

Future research should focus on action-learning programs that are carried out in different work contexts using the alternative method described in this paper, instead of reinterpreting learning projects conducted without employing this approach. This would provide answers as to why the orientation, optimization, and continuation phases in some learning-project cases were relatively under-addressed. It would also show exactly how important it is for employees, learning coaches, and managers to pay sufficient attention to these activities. An action research approach would be suitable for these questions to be answered. It would offer the various actors an opportunity to study, interpret, and redirect their organizing strategies by relating them to the theoretical framework presented by the researchers. This will enable the practitioners to develop situated theories of practice about organizing action-learning programs. The researchers will be able to build empirically founded models for the various strategies that employees, learning coaches, and managers can employ in different work contexts.

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Comparing Action Learning Programs at Six Universities on Three Continents: Similarities and Differences

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There is a growing inclination to use action learning approaches for leadership development purposes in US businesses and governmental institutions. Enterprises that have been involved with action learning include General Electric (GE), Exxon, Union Carbide, CONOCO, Public Service Electric and Gas (PSE&G) of New Jersey, Motorola, TRW, Arthur Andersen, Marriott, US Army and British Airways. Use of action learning has been slower to take hold in institutions of higher learning. Six universities on three continents in the 1990's have launched significant action learning programs. These universities are also in various ways serving as a collaborative network for action learning initiatives in higher education.

Keywords: Action Learning, Higher Education

Until quite recently, there has been only limited application of action learning approaches in institutions of higher learning. Action learning focuses on learning through the address of real issues and problems. Willis (Unpublished paper, 1999) defines it this way:

> Action learning is a process of reflecting on one's work experience and beliefs in a supportive/confrontational environment of one's peers for the purpose of gaining new insight and resolving real business and community problems in real time.

The problems to be addressed can be extremely complex, even insoluble. Because there is no "book solution" and the problem area being addressed can be unfamiliar, the learner may be operating well beyond his or her personal comfort zone. In such a situation many opportunities for "deep" learning can present themselves. First and foremost is the questioning of underlying assumptions. Because a *real* problem is being addressed, there is often a sense of urgency involved.

What corporations seem to find so attractive about action learning modalities is the multiple benefit values the approach can yield. Participants have an opportunity to practice their leadership skills in a real life situation. There are opportunities to practice team building as well, including group norming and conflict resolution. Basic problem solving skills can be enhanced. There are also more subtle benefits that can accrue, such as an enhanced sense of self-worth and self-confidence. For many reasons, but primarily because of proven value, action learning has found its way into the mainstream of corporate universities. Meister (1998) lists action learning as a key part of the methodology now being adopted as a result of the "paradigm shift from training to learning." (p. 22)

Given the growing interest in action learning in business, why have institutions of higher learning been slow to use the approach? One reason seems to be the large psychological shift required. Universities are places where didactic approaches to learning are still very much in vogue. The lecture, prescribed lesson plans and formal ways of learning are deeply embedded norms of behavior. Attention is often on preset learning objectives. Action learning is grounded in principles that fit well with adult learning theories, such as androgogy, with the learners having a substantive voice in how the learning experience will unfold and what will be learned. This can be diametrically opposed to a model that gives the professor a ubiquitous presence and authoritarian hold over the learning.

Problem Statement

What can we learn from examination of the six universities that are the focus of this research, spanning three continents, three US states and the District of Columbia? The universities involved are: Virginia Commonwealth University, George Washington University, University of Salford, in England, Georgia State University, University

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of Texas at Austin and the University of Ballarat, in Australia. When we compare the action learning programs at these universities, what similarities and differences are evident, and what do the comparative profiles suggest in terms of a model that can be adopted widely in university settings?

Theoretical Framework

Probably the most basic theoretical construct related to action learning is that developed by Reginald W. Revans of England. He posits that learning equals Programmed Instruction (P), plus Questioning Insight (Q), (1983, p. 11). He reduces it to the equation $L = P + Q$. From this basic formulation, Revans outlines a basic philosophy of what it takes to survive in a rapidly changing world environment. He says, for example, that unless the rate of learning exceeds the rate of change in your environment, you will be in trouble. This applies to both individuals and organizations. He goes on to say that Programmed Instruction, which includes lectures, textbooks, case studies, and simulations all have their place, but what becomes of stellar importance as we enter the millennium is the Questioning Inquiry. Revans also believes you must start with the "Q" rather than the "P", because Questioning Inquiry can alert you to the absence of relevant "P" you need or the flawed nature of the "P" that exists.

Revans also stresses both reflection and action (p. 49) and the consideration of four principal "exchange options" for learners. They are a combination of Problem and Setting, and whether they are familiar or unfamiliar (p. 19). While any of the four possible options can produce meaningful learning, he considers the coupling of an unfamiliar problem with an unfamiliar setting the most powerful and potent platform for learning. It also causes the "set" to draw on its limited expertise in questioning assumptions and seeking new and creative solution paths.

Research Questions and Propositions

If there is a belief that action learning can hold out promise for meaningful learning in the university setting, as seems more and more evident in the business context, then how do we go about it? The university setting and culture tends to be quite different from a business environment. The classroom experience, as traditionally modeled, is far removed from the raw dynamics of running a competitive business in a global economy. The classroom can be isolated from what is occurring in the workplace, and the professor, while academically and intellectually keen, may lack experience and empathy for the business environment. The term business environment is used here to include all professional organizations, whether private companies, governmental organizations or non-profits.

Taking some of the common threads associated with action learning, several research questions were developed for the purposes of comparative analysis and profiling of the six programs:

1. How does it fit into the curriculum?
2. What triggered the action learning approach, and when?
3. How has it evolved and how is it structured?
4. Who are the students?
5. How are individuals assigned to the sets?
6. Are the projects jointly held by members of the set, or does each set member have his or her own work related project?
7. Does the project represent familiar or unfamiliar territory to the student?
8. How large are the action learning sets?
9. Do sets have external facilitators? What are they called, and how do they operate?
10. How is project/problem determined? Is it a real project? Does it cause students to "stretch"?
11. How are course grades determined, as applicable?
12. To what extent is the client educated/informed about action learning?
13. What type of orientation is provided to students concerning the action learning process?
14. What basic philosophical grounding influences the program?
15. What principal challenges are encountered in using action learning?
16. What success stories come to mind?

Methodology and Research Design

The researcher originated the action learning program at Virginia Commonwealth University and has been a collaborator with each of the other five institutions of higher learning for the past three to five years. That collaborative bond added greatly to the ability to probe the underpinnings of each program.

The researcher interviewed the principal originator and organizer of each program outside VCU. He also subjected his own program to like scrutiny. The principals involved were:

1. Robert L. Dilworth, School of Education, Virginia Commonwealth University.
2. Michael J. Marquardt, Department of Human and Organizational Studies, School of Education and Human Development, George Washington University.
3. David Botham, Director of the Revans Centre for Action Learning and Research, University of Salford, United Kingdom.
4. Verna J. Willis, Department of Public Administration, Andrew Young School of Policy Studies, Georgia State University.
5. Annie Brooks, School of Education, University of Texas at Austin.
6. Neil McAdam, Business School, University of Ballarat, Australia.

A limitation of the research is that all six program leaders are very close to their individual programs and this can produce some inherent bias. Another limitation of the research is that the six universities can be construed to be the primary universe, with results of the research therefore taken as applicable to all such programs. The six programs concerned can be considered leaders in the field, but there are also other universities around the world actively exploring action learning applications

Word Profiles of the Six Programs

Virginia Commonwealth University (VCU) began exploring action learning in 1993, and by 1995 had revised its Adult Education and Human Resource Development Program in the School of Education to incorporate action learning principles. All courses were brought under a portfolio assessment system that encouraged students to keep personal learning logs and required "reflective essays" at the conclusion of each course on what had been learned. Action learning exposure was threaded through the program, especially in the Human Resource Development related courses. The Comprehensive Examination requirement in the Master's degree program was jettisoned in favor of a capstone course entirely focused on action learning.

The Master's degree students are assigned to a set of four to six students in the capstone course. Six students is considered ideal. These students are assigned a *real* project/problem in urgent need of resolution at a local business. Students are NOT given a choice of project or set. Sets are mixed to promote diversity and blend various learning styles. Half of the course grade is team based and requires a formal presentation to the client and submission of an extensive written report at semester's end. In spring 1999 one set worked on a major problem for White Oak Semiconductor, a multibillion dollar Motorola-Siemens start-up.

Students also submit an extensive individual report on the action learning process, group dynamics and personal lessons learned. Throughout the course, students engage in dialogue that focuses on the learning that is occurring.

The professor serves as a "learning coach" to all sets and jump starts the process as a facilitator. Thereafter, the professor as a "learning coach" attends set meetings only as scheduled or "by invitation only" of the set.

Philosophically, the program indexes to the principles developed over many years of action learning experience by Reg Revans, as well as the writings of Mezirow, Knowles, Lindeman, Lewin, McGregor, Schön, Argyris, Freire and Drucker. The core philosophy is on setting up a good process and then trusting it. That requires standing back and practicing empowerment, allowing learners to learn through the "wash board" road of real life experience. This permits learning to be constructed in ways that are personally relevant to the learner.

George Washington University

Action learning is now threaded through both Master's and Doctoral level programs. In the case of the Executive Leadership Program (ELP) Doctoral program, the practice of action learning is introduced to all students soon after they enter the program. They also have the option of taking an elective course in action learning that is offered each year. In this case, each student comes to the course with a problem from work. They are assigned to sets of five to six students. During the semester they discuss the challenges and the learning that is occurring as they develop their individual projects. Each set rotates facilitator responsibilities within the set after seeing it demonstrated by a faculty member during initial phases of the course. In effect, students are asked to manage their own set dynamics as part of the learning process. In terms of course grade, a 20-page paper is typically submitted as a part of the doctoral level course on what has been learned, and what the student has learned about him or herself. A final presentation must be given as well.

All students, whether in Master's degree or Doctoral programs, end up gaining an exposure to action learning. Action learning has become a core staple of curriculum design. In the case of the program extension in Singapore, the first two courses use action learning sets, with eight different meetings over a three-week period In terms of philosophical grounding, students are exposed to such theorists as Jack Mezirow, Reg Revans, Kurt Lewin, Malcolm Knowles and Warner Burke.

University of Salford, The Revans Centre for Action Learning and Research.

The Revans Centre for Action Learning and Research was created in 1995. Its first group of action learning students began their study in mid-1996. It now has over 200 students enrolled, 22 at the doctoral level, 32 diploma (certificate) students and the balance, Master's degree students. The entire program is action learning based. Students operate in action learning sets of five or six and deal with individual projects from their workplace. Forty-four percent of the students are currently from the National Health Service, with the balance coming from a variety of backgrounds. Seventeen companies now sponsor the Centre.

While a member of the faculty is assigned to each set, this "facilitator" is only intermittently present at set meetings. A "policy of politeness" is followed, with the facilitator usually only present when the set invites them. Students are not given grades, but there is an interview assessment by a faculty panel at the mid-way point in the program (usually after the first year) when the student presents his or her "achievements" to a panel. An 8,000 word paper is turned in relative to what the student has learned. While the project is material and significant, it is secondary to what the student is learning about their own learning, process of learning and their own development as a human being.

About two years after the interim assessment, the student appears before another panel and is subject to all the rigor related to a thesis requirement (50,000 words for a Master's degree and 100,000 for a Ph.D.).

Georgia State University

The action learning program at Georgia State University (GSU) has been in existence since spring 1996. Action learning has become an integral part of the philosophy governing delivery of the Human Resource Development curriculum. The capstone course in the Master's Degree program is based on action learning. It is expected that it will also once again be a part of the Doctoral program when new applications are accepted. Most students are in the Human Resource Development program.

The capstone course involves students with an assigned project out in the community. Operating in sets of five to six students, each set is assigned a common project. The project is negotiated with a local business client by the professor and will usually be in an area unfamiliar to the student. The project must be real and significant to gain acceptance. In determining who will be in a given set, gender, learning style differences, nationality, whether from a private or public sector business environment, race and prior experience in human resource development are taken into account.

Students meet in class each week to discuss the project and what is being learned. The professor serves as a "shadow facilitator", meaning that students fundamentally manage the set process.

Fifty percent of the course letter grade relates to the project, including a final presentation to the client and any presentation related papers. The other half relates to "auxiliary learning." Students submit four major papers during the semester on literature that bears on issues relevant to action learning. Students also submit reflection papers on what is being learned. To prime students for their action learning involvements in the course they are exposed to the writings of Revans, and other action learning specific literature. They are also taken through exercises on questioning, since "questioning inquiry" is so central to action learning. Philosophically, adult learning theory and the proposition that learners should have active involvement in the learning process, undergird program design. The philosophy also speaks to an appreciation for diversity, acquiring a deeper sense of humanity, sense of optimism that things (however large) can be changed and an understanding that the student doesn't need to be perfect.

University of Texas at Austin

The action learning program at the University of Texas (UT) at Austin began in 1994. Its locus is in the School of Education, but it is distinguished by the fact that it has evolved into a cross-disciplinary degree as well. The Education School serves as academic partner in terms of quality of the Master's of Human Resource Development Leadership (MHRDL) and the Business School handles the financial aspects and logistics. Action learning is interwoven throughout the program and the core of three course containers that all Master's degree students must take.

The first (a four credit hour course) covers the entire first year in the program and involves an action learning project. The second year students take a Master's thesis related course that links theory to practice (e.g., the theory of power). In the third year, because of the growing importance of global awareness, students complete a course that takes them to Australia in partnership with the University of Ballarat. While in Australia, they visit companies and learn of their principal issues and challenges. They then do a week-long analysis and report back to the businesses on questions that they perhaps need to be asking as they work through their principal issues and challenges.

Students are assigned to action learning sets of six on the basis of ethnicity, gender, background and learning style (Myers-Briggs Temperament Inventory). They are not allowed to pick their sets. Students bring a project from their own workplace. It must be a real project with a concrete anticipated outcome. Each set has a "set adviser", often a doctoral student taking on this responsibility in a paid adjunct professor status. Advisers are rotated among sets, and the set advisers themselves form a set where they can share experiences and discuss their own learning

Basic philosophical grounding of the University of Texas program relates to the writings of Revans, a "post-structuralist" view, equality of power, a belief that expert knowledge no longer holds sway, concern with marginal populations (and the value of the knowledge that can be gained from people at the margin), and multiple bases of knowledge. Grading of students is based on their "descriptive log" of the learning process, project presented to the professor (as if the client), reflection by students on the group process and "meta-reflection" on individual learning.

University of Ballarat

The University of Ballarat is currently (1999) reviewing and adapting its curriculum design related to action learning. Interest in action learning extends back to 1993. It was sparked by an effort to identify approaches that might generate "work based reform". It first incorporated action learning in its Master's degree in Business Management (MBM) program in 1996. As initially conceived and orchestrated, students became involved with "functional preparatory knowledge units" in their first year in the program. The functional preparation was built around action learning and development of a "questioning style". During the introductory phase of the program, a three-day "preparation workshop", the students choose the set they wish to be in. While the sets are formed based on student input, they are asked to use diversity as a prime reference point. At least one "overseas student" is to be in each set.

During the second year, students enter a more advanced stage that is crafted around action learning. Students determine individual projects they will be working on in concert with the professor. Forty percent of their curriculum content (and grade) relates to the project. Another 30 percent relates to their personal development, and the last segment relates to what is called the field of studies concept. They shape and present individual learning contracts as well as an "operational contract" with the client specific to the project. The client is usually the workplace supervisor of the student. The professor or other staff member works with the set initially. Thereafter, the faculty member joins the set "by invitation only". The sets are expected to develop their own norms and do their own facilitation.

Assessment of students is distributed and includes, in the case of the 60 to 90 minute final project presentation to client, evaluations by the client, academic supervisor and fellow set members. Philosophically, the program is heavily influenced by Revans. The most effective way to learn is viewed as allowing "free flight" in association with mature colleagues. It requires "giving up" the usual way of learning. The less effective way of learning, and "the easy way out" is the definitive structure of support associated with traditional educational methods.

Synthesis of Research Results and Findings

There were seventeen areas of comparison identified as a result of the research. They are shown below:

Areas	Yes	Somewhat	No/Very Limited
Focus on learning and critical reflection.	All		
Use of a real world project as a learning vehicle.	All		
Use of action learning sets.	All		
Areas (Continued)	**Yes**	**Somewhat**	**No/Very Limited**
Sets of five to six.	GW, GSU, UT, Salford	VCU and Ballarat will accept four, while preferring five to six.	
Students may select set they belong to.	Salford GW Ballarat	VCU	UT, GSU,
Extensive pre-orientation of of students in action learning.	Ballarat GSU GW, UT, Salford	VCU	
Connection to Revans model.	All		
Individual student projects that are workplace based versus joint set project.	Ballarat GW Salford	GSU, VCU	
Final presentation required (project).	All		
Student unfamiliarity with project.	GSU, VCU	Ballarat	GW, Salford, UT
Faciltiation of set by person External to the set is extensive.	UT		Ballarat, GSU, GW, Salford, VCU
Extent to which client is given a comprehensive orientation on action learning.	GW	Salford (Increasingly client is a former student.)	Ballarat GSU UT VCU
More challenging to student than traditional curriculum.	All		

Multiple AL based courses involved.		Ballarat Salford UT	GW (one at Ph.D. level; can be more at Master's degree level).	GSU (one)	VCU (one)
Student evaluation influenced by more than one professor's judgment.		Ballarat Salford		GSU GW	UT VCU
Learning perceived to far exceed traditional classroom approach.	All				
A more challenging and complex way to teach from a professor's perspective.	All				

Analysis:

A review of the comparisons identified above indicates that the principal differences among the programs relate to the opportunity for students to select the action learning set they will be assigned to, whether the project is an individual one or one to be addressed by set members jointly, whether students have prior knowledge/expertise in the project area, the degree to which action learning is found in multiple course containers and the nature of facilitation. In large measure, the degree of commonality across the programs is much greater than the dissimilarities. It is worth noting that five of the six programs limit the amount of external facilitation provided to sets. This has been an area of philosophical disagreement among scholars of action learning. Some believe that the coaching and intervention by facilitators is necessary for the learning process to be fully realized. Others take the view (including Revans) that an important part of the learning comes from self-management of the set and learning processes by its members.

Successes

All those principal organizers/interviewees associated with the six programs covered by this research could point to perceived successes. Each volunteered information that related to benefit values they associate with using the action learning format. They included a heightening of the students feeling of self-worth and self-confidence, personal transformation, enhanced ability to work in teams and take on daunting challenges, and the inclination to think much more deeply about the basis of their assumptions. There is also evidence of enhanced career success. Students also learn how to ask the right questions of themselves and others.

Conclusions and Recommendations

1. Action learning has proven its value at the six universities covered by this research and deserves to be more broadly applied in higher education.
2. Action learning can be counter-intuitive to academics who have used formal instructional methods throughout their careers. Therefore, it is important that they experience it before trying to apply it.
3. Action learning can be counter-cultural to organizations, including academic institutions, because of the egalitarianism of the concept. It can be perceived as a threat to established power structures. Therefore, it requires someone in authority at a high level, who understands the concept and is willing to personally support it, to leverage introduction of action learning.
4. Action learning is a manifestation of adult learning theories in practice, especially androgogy, where the learners are at the center of the learning experience and empowered to shape it in personal ways, as opposed to a predetermined learning design that may prove tangential to learner interests.

How this research contributes new knowledge in HRD

There has been rising interest in use of action learning in corporate settings. It also is making a substantive appearance in the curriculum of corporate universities. It has not made deep inroads in higher education.

There is a need to devote more attention to how action learning can be made to prosper in higher education, as a complement to, not as a replacement for coverage of core academic subjects. The answer may lie in determining how to effectively blend action learning into academic curricula. That is why more research, such as that covered by this paper, is needed.

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A Systematic Model of Job Design by Examining the Organizational Factors Affecting Satisfaction

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By multiple stepwise regression analysis and factor analysis, we found the main organizational variables which affect Chinese satisfaction in work design, and proved that the job characteristics are not independent in organization., they are influenced by some organizational characteristics. According the conception of the open social-technical system of organization and results above, a systematic model in job design to improve the Job Characteristics Theory with the organizational characteristics were advanced.

Keywords: Job Design Model, Job Satisfaction, Organizational Factors

Since the Two-Factors Theory was given by Herzberg(1968), there are many researchers have been done in order to find a best way to motivate employees. The typical one is Hackman's study of job characteristics in job redesign in 1980. In his study, Hackman advanced the Job Characteristics Theory of Work Motivation, and pointed out that the employee's performance depended on his three Critical Psychological States which was influenced by five Core Job characteristics of job: skill variety, task identity, task significance, autonomy, feedback from the job itself. However, he did not indicate whether these five Core Job Characteristics were affected by organizational factors.

In fact, there are some indications that job characteristics were not the only factor that affects the employee's critical psychological state, especially job satisfaction. With the economic reform in China, the employee's enthusiasm in most state enterprises is lower than that in private enterprises, collective enterprises, or other kinds of enterprises. The fact is all there. So, we can not ignore the organizational factor among all influencing factors. There also is a similar sign in the western private enterprise, e.g., the IBM and other American private companies are learning from Japanese enterprise, such as SONY and TOYOTA.

All of the indications show us that some organizational characteristics, especially those depend on the culture of organization, may participate in influencing the employee's performance. They, perhaps, act on individual directly or indirectly by means of affecting some core job characteristics.

Thus, it would be very essential for us to make a systematic study on the organizational features in order to establish a systematic model and find a best way in job design or redesign to raise human performance.

Job Satisfaction and Organizational Influence

For the manager, the key fact is that some workers achieve a sense of satisfaction with their jobs, while others do not. So, the debate over whether people are really satisfied or dissatisfied with their work is likely to continue. The manager's task is to discover what work means to individual subordinates at given points in time and strive to help to make that meaning as positive as possible. The concept of job satisfaction can help the manager master this task. This concept recognizes that the ultimate meaning of work to an individual will be determined by such things as the task performed, the organization and the work unit within the job exists, and the co-workers, and other persons with whom the individual interacts.

Job satisfaction is the degree to which an individual feels positively or negatively about the various facets of job-tasks, the work setting and relationships with co- workers. It may be affected by many factors, such as the company's policy, supervision, work conditions, relationships with peers, responsibility, advancement, and achievements etc.. After analyzing almost four thousand responses to his survey, Frederick Herzberg and his associates developed one of the most frequently praised and criticized theory in organizational behavior (OB),

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named the Two-factor Theory.

In Herzberg's research, the sources of job dissatisfaction are associated with the job context. That is, job dissatisfaction was linked more to the work setting than to the work itself. Herzberg refers to the sources of job dissatisfaction as hygiene factors. The hygiene factors include such things as working conditions, interpersonal relations, organizational policies and administration, supervision, and salary. Herzberg argues that improving a hygiene factor such as working conditions cannot make people satisfied with their work. It will only prevent them from being unhappy. To improve job satisfaction, the manager's attention must shift to motivation factors. Achievement, recognition, work itself, responsibility, and achievements are the motivation factors. They are part of job content, that is, they are related to what people actually do in their work. Herzberg refers to them as motivation factors. To Chinese workers, however, what are the hygiene factors or the motivation factors? With the China's economy reform, the workers' enthusiasm in most state enterprises is lower than that in private enterprises, collective enterprises, and other kinds of enterprises, though facing the same task. So, perhaps, the main influencing factors are the organizational variables. The fact is all there.

The sign shows us that Chinese employees' satisfaction may be influenced by some organizational factors. In other words, it would be very necessary for us to examine and define the organizational effects of state enterprises systematically so that a best way may be found to motive Chinese workers with the organizational reform. This study tests the main affecting variables of organization.

2 Theoretical Framework

2.1 Hackman's Job Characteristics Theory

As we know, Taylor is the earliest one who studied the job features. His scientific principles of managing was a traditional study of job traits in work design. Other researchers, Arth, Turner, and Lawerence etc., had studied the relation between the objective traits of job and the employee's reactions to the job traits. They found that the employee's reactions are different with different culture background.

Hackmam & Lawler are the founders of the modern theory on job characteristics. They maintained that it was essential to advance a theoretical framework in order to predict the relationships between job characteristics and employee's reactions. On the basis of Vroom's Expectation Theory(1964) and Maslow's Hierarchy of Needs Theory(1943), they advanced a framework on job characteristics and employee's reactions, and found five core characteristics of job : task identity, task significance, skill variety, autonomy, and feedback from the job itself.

They hold that the employee's reactions to his job were determined by his perception to the job characteristics, rather than the objective traits of job. In their framework, they suggested that the employee's critical psychological state, which included the experienced meaningfulness of the work, experienced responsibility for outcomes of the work, and knowledge of actual results of the work, depend on five core job characteristics, and determined his working behaviors at the same time(see figure 1).

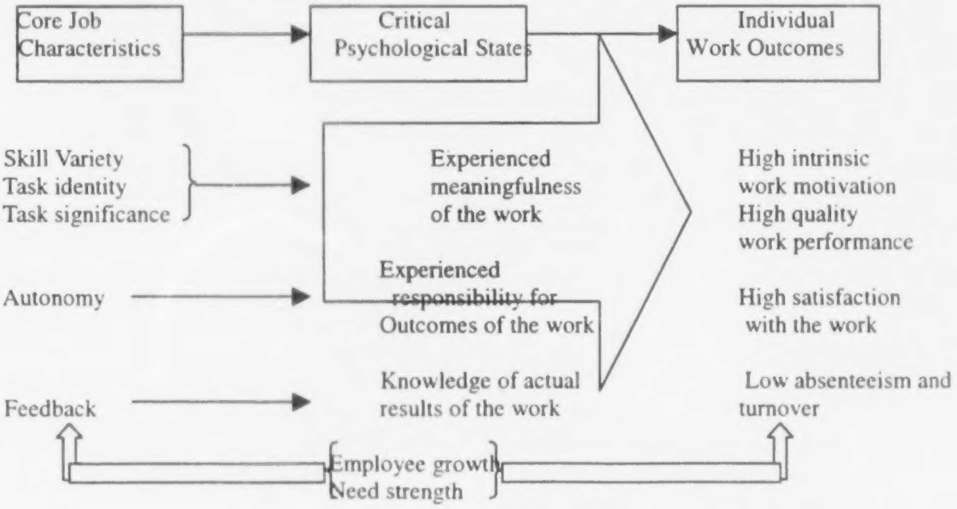
Core Job Characteristics
Critical Psychological States
Individual Work Outcomes
Skill Variety
Task identity
Task significance
Experienced meaningfulness of the work
High intrinsic work motivation
High quality work performance
Autonomy
Experienced responsibility for Outcomes of the work
High satisfaction with the work
Feedback
Knowledge of actual results of the work
Low absenteeism and turnover
Employee growth
Need strength

Figure 1 Hackman & Lawler's framework

In 1971, Richard Hackman and Edward Lawler reported a theory that attempted to identify when jobs will provide high levels of intrinsic work motivation. Their theory was tested in a sample of telephone company employees, with positive results.

The current version of this theory is shown in Figure 1. Five core job characteristics are identified as being task attributes of special importance to job designs. A job that is high in the core characteristics is said to be enriched. The core job characteristics and their definitions are

Skill Variety:

The degree to which a job requires a variety of different activities in carrying out the work and involves the use of a number of different skills and talents of the employee.

Task Identity:

The degree to which the job requires completion of a "whole" and identifiable piece of work, that is, one that job involves doing a job from beginning to end with a visible out.

Task Significance:

The degree to which the job has a substantial impact on the lives or work of other people elsewhere in the organization or in the external environment.

Autonomy:

The degree to which the job gives the employee substantial freedom, independence, and discretion in scheduling the work and in determining the procedures to be used in carrying it out.

Feedback from the Job Itself:

The degree to which carrying out the work activities required by the job results in the employee obtaining direct and clear information on the results of his or her performance.

2.2 A New Strategic Systematic Model of Job Design

Being an open social-technical system, the organization could be considered as a system which consists of some hard and soft subsystems. Structure, material, and technology make up the hard subsystem, and the soft subsystem is formed of social psychological subsystem, objective and value subsystem, managerial subsystem, and any other soft subsystems. This is a cross section of organization. If the organization was cut off vertically, meanwhile, it would display a stereoscopic structure: strategy, coordination, work, and individual. All of the cross and vertical subsystems, and the hard and soft subsystems make up the general characteristics of organization.

Size, structure, and technology make up the hard features of organization. They are the main feature. The technical feature prominently affects not only the managerial system, but also the coordinate system. The organization with stable technology takes care of the effective objects, the other with dynamic technology pays attention to solve the problems (Kast,1979). Kast pointed out that technology was a key factor to determined task and degree of specialization. If the work were improved only with technology and engineering, the improvement would disintegrate the social subsystem of organization and hinder the technology from putting into effect. The technical feature, hence, would be a essential variable in work study.

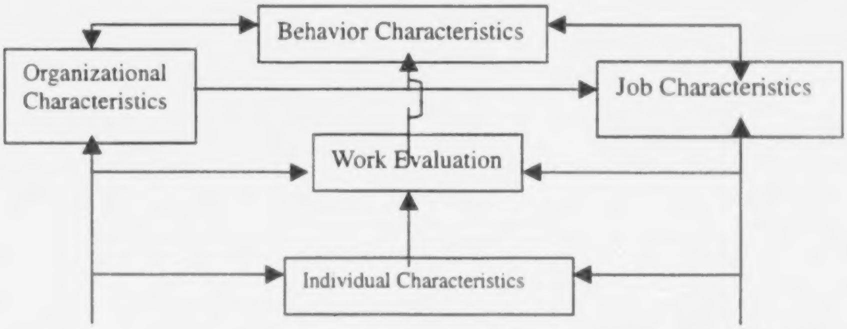

Figure 2 A new strategic systematic model of job design

There also are other hard variables: the effective degree of organizational structure and functions, the object of organization, the policy of personnel and distribution system. Meanwhile, the climate, participation, motivation, creative and cooperative power, value outlook, the philosophy of managing and the stability of organization are the soft main characteristics of organization.

With the results of stepwise-regression analysis in my study, we found that the employee's participating behavior was influencing by the effective functions and the value outlook of organization.

All of the parts in this model (figure 2) are not independent, except the individual characteristics. They are interrelated and interact on each other directly or indirectly. Each part, being a subsystem, consist of some main characteristics variables. Only when had the systematic study on these variables' relationships been done, the improvement on the organization and job would be brought into effect.

3 Method and Procedure

The traditional studies in organizational theories apply higher structural and closing method. Modern organizational theories suggest an open and systematic method and consider the organization as an open social-technical system which consists of some relative subsystems.

With the concept of the open social-technical system of organization, enterprise will never be a close production system. It were necessary not only to take the inter-behaviors into standardization, but also to study the effect of social subsystem and technical subsystem, if the enterprise would make the job and organizational redesign effective.

According to the concept of open social-technical system of organization, the framework in job design must consist of three subsystems at least: organizational subsystem, work subsystem, and individual subsystem.

3.1 General Measuring Job Satisfaction

Researchers go to great lengths to create good measures of job satisfaction. One straightforward approach is to simply ask people to respond orally or in writing to a question such as this.

How satisfied are you with your present job□

not at all somewhat extremely

1 2 3 4 5

Lets measure your"job"□satisfaction. Circle the response in the previous question that best reflects your feelings so far about one of your courses□Assume everyone else in the class also answers the question for the same course. Suppose□too□that your instructor collects and summarizes the responses. What would the instructor know if the average of all responses to the question was 3.5? Is this a good, bad, or in-between satisfaction score? Actually□it is very hard to say if the 3.5 is good or bad as a satisfaction score. It is hard to know whether or not people share the same meanings for the terms "somewhat" and "extremely." Furthermore□it is likely that there are some aspects of the course that you find to be more satisfying than others. Perhaps, you had hard time deciding how to respond to the course satisfaction question because of this.

Some instructor would really like to know what he or she can do to improve the course and raise the average satisfaction score. Once again, the single question measure of job or course satisfaction proves deficient□since it gives the instructor no insight into what facets of the course could be improved upon. It is also deficient because it is not as reliable as multiple items in measuring the same concept. That is□single item measures are answered less consistently than those with more items.

Because of problems like the above□researchers try to use multi-item measures of various facets of work that can became sources of satisfaction and dissatisfaction.

The instrument is called the Job Descriptive Index, or JDI for short. The JDI measures five facets of job satisfaction the work itself, quality of supervision, people on present job (co-workers), promotion, and pay. Each of these facets can be a source of meaning in work, and each represents a possible inducement to work. Instruments by the JDI are important to both researchers who are interested in learning about the sources of job satisfaction and its consequences, and to managers who are interested in predicting and controlling these outcomes.

3.2 The Job Diagnostic Survey(JDS)

In Hackman's study, they designed the Job Diagnostic Survey(JDS), which consisted of 78 items. Using the TDS to test the employee's perceptions to the job characteristics, critical psychological state, satisfaction, and others, we could find the problems in work system, and decide the necessity and feasibility on the work redesign. With the results of testing, we could improve the managing method and evaluate the work redesign.

3.3 Procedure of This Study

First step, we selected the samples of enterprises and typical working position.

Secondly, interview the employees randomly.

Thirdly, a questionnaire was designed to measure job satisfaction and modified according to the pre-measure.

Then, Survey

Next step, statistics and analysis.
Finally, results and recommendation tactic for job improvement.

3.4 Method of this study

According to the reasons above and Chinese personality, the questionnaire with five point scales was designed and used in this study, which consisted of forty items. One hundred and seventy workers were selected as the subjects at random from three state enterprises in different districts: the city of Shanghai, Tianjin and the city of Jilin. The subjects were asked to finish the questionnaire separately at the same time in their enterprise.

The SPSS(Statistic package of social science) was used to deal with the data of the workers' responses. The test-retest stability of the questionnaire is 0.81 . All of the organizational items were compounded twelve variables by factor analysis: the effective degree of organizational structure and functions, the object of organization, the policy of personnel and distribution, the climate, participation, motivation creative power, value outlook, the philosophy of managing and the stability of organization.

4 Results and Discussion

4.1 Job satisfaction affected by the organizational factors

In this study, a stepwise-regression was done to the organizational effects on the workers' satisfaction. The job satisfaction is the degree to which an individual feels positively or negatively about his job on the whole. The autonomy satisfaction is the degree to which an individual feels positively or negatively about the autonomy, which is the degree to which job gives the employee substantial freedom, independence, and discretion in scheduling the work and in determining the procedures to be used in carrying it out. Distribution and communication will also be one of the factors, which influence the workers' performance. These main influencing factors were selected from 24 organizational variables by the multiple stepwise-regression analysis.

Table 1 shows the results of the multiple stepwise- regression analyses for the workers' satisfaction variables which regression equation have statistics significance by Fisher test.

There are only the independent variables, which have the significant main effect from the organizational characteristics as the independent variables.

Table 1.
Results of the multiple stepwise-regression analysis on the satisfaction with the organizational variables as independent variables

Dependent variables	Independent variables of organization	Stepwise-regression			ANOVA of the equation: F P	Multiple correlation R^2
		Coeff.	T-test	P		
Job Satisfaction	Constant	2.56	8.16	.0001	1.896 0.041	0.217
	Climate	-0.20	-1.84	.069		
	Personnel Policy	-0.25	-2.54	.034		
Satisfaction of Autonomy	Constant	2.71	6.83	.0001	1.74 0.066	0.203
	Creative Power	0.24	1.89	.062		
	Rationality of Distribution	0.21	1.77	0.81		
Satisfaction of Communication & Distribution	Constant	2.27	6.41	.0001	1.814 0.053	0.209
	Rationality of Distribution	0.30	2.59	.011		
	Effectiveness of Organization	0.25	1.76	.082		

As the results of correlation and multiple stepwise-regression analysis, we found that the satisfactions of Chinese workers of state-owned enterprises were affected by some organizational variables. The job satisfaction were influenced by the organizational climates and the personnel policy. The workers' autonomy satisfaction were influenced by the creative power and the rationality of distribution.

The rationality of distribution and the effectiveness of the organization act on the workers' satisfaction of the communication and distribution.

4.2 General Findings

As the results of coorelation and step-regression analysis, some general findings were found:

Firstly, the model of Hackman's theory of the job characteristics and motivation existed in Chinese enterprise.

Secondly, some core variables of job characteristics were not independent in organization. They were influenced by some organizational variables. The work entity were affected by the management philosophy, the organizational stability, the cooperative power and the effective motivation. The Skill Variety were influenced by the organizational effective construct and creation power.

Thirdly, the employees' critical psychological states, the cognition and evaluation of work were affected by both organizational characteristics and job characteristics.

Finally, the level of position, the length of working on the current position, and the work orientation were the effective intervening variables which obviously affected the employee's perception and evaluation of his or her job.

According to the results, the reason that the organizational climate influences the workers' job satisfaction, is that there are less management of participation. To the personnel policy, the fact is that the candidate's personnel relationships are paid more attention for promotion than his abilities and performance. The weaker creative power, the less participation, and the less autonomy satisfaction. To the distribution, the principles according to work cannot be carried out completely in state enterprises.

In the study, in a word, we found the organizational climate, personnel policy, creative power, and the rationality of distribution and the effectiveness of organization have the main effecting on the Chinese workers' satisfaction in state enterprise. Only had the organizational reform of state enterprises be done with such above organizational features, the state enterprises could be active thoroughly. To the foreign funded enterprises, the Chinese employee's psychological features should be considered fully in organizational design in order to be suited to local conditions and cultures. It would be a critical technology to run the joint ventures smoothly in foreign country.

Although we have found the relationships between job and organization features and advanced the systematic model in work and organization design or redesign, but the more exact relation have not been indicated. It need a further discussion. It show us It would be a necessary for further study to define the general principles on job design or redesign.

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Are Managerial Women Getting What They Need to Succeed? A Look at Job Satisfaction

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It is well recognized that women in business have not risen to the upper ranks in the same proportion as their male counterparts. In a national study, job satisfaction along with other variables were measured and compared between managerial and executive women to determine if any significant differences exist which may account for this phenomenon.. Results indicated definite differences between managers and executives which may serve as a basis for the design of incentive and development programs.

Keywords: Job Satisfaction, Women, Management

As a student and educator of business, it has frequently been apparent to this researcher that our workplace has undergone changes in recent years some of which have been more easily ingrained into the corporate world than others. Since the early 1970s, one very apparent change has been the increasingly diverse workplace. Minorities and women are more prevalent in managerial jobs than ever before. According to the United States Department of Labor Statistics (1998), women currently comprise more than 50% of the workforce. Anti-discrimination legislation and Affirmative Action programs of recent years have aided in the recruitment of qualified women to fill management track positions, and the percentage of women holding managerial jobs has increased from 16% in 1970 to 42% in 1992 (Powell & Butterfield, 1994). But, this progress may be misleading. Women remain underrepresented in higher ranks of their organizations and professions (Sharpe, 1974). This pattern of under-representation is also prevalent in all areas of business (Jacobs, 1994). So the question is, what can explain this phenomenon? Is there something we as researchers and educators are overlooking about women managers and executives? Are women under-represented because of some job-related factor, some gender-related factor or some systemic barrier. To be able to answer these questions, we must develop a greater understanding of the female executives and managers in our workplace.

In general, the assumption is that workers who exhibit satisfaction perform at higher levels than those who are not satisfied. Likewise, workers who perform at higher levels will likely make a greater contribution to the organization and therefore are more likely achieve greater status within the organization. So it would be logical to assume that those not experiencing satisfaction are not utilizing their energies to reach that next level. Therefore, the purpose of this study as outlined was to examine job satisfaction in relation to selected personal and psychological factors to determine if any statistically significant relationships exist which can offer explanation for the scarcity of women in the ranks of upper management.

Conceptual Framework

The concept of job satisfaction can be addressed from differing vantage points. In its most basic sense, job satisfaction then is the positive emotional state which results from the appraisal of one's job experiences (French, 1990; Mathis & Jackson, 1994). While specific definitions vary, job satisfaction as described by this definition is basically determined by one's own evaluation of the work experience and the rewards received for efforts put forth. If those reward expectations are met, then the job is satisfying. If there is a discrepancy between what is expected and what is received there is a possibility for job dissatisfaction. Argyris (1957) describes job satisfaction as the congruence between what the job actually offers and the expectations the employee has for that job. The greater the congruence between what is desired versus what is received, the greater the satisfaction; the greater the discrepancy the greater the possibility of dissatisfaction. Whatever the formal definition of job satisfaction may be, the underlying concept is that worker expectations need to be met to assure job satisfaction.

Many theorists have also argued that it is the degree to which one's needs are met which determines the degree of job satisfaction (Kuhlen, 1963; Porter, 1962; Schaffer, 1953). These researchers provide support for the proposition that job satisfaction is related to the worker's needs and how well the job meets that worker's needs.

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Schaffer (1953), in one of the first studies to investigate that relationship between needs and job satisfaction, found that one's needs are related to overall job satisfaction. The conclusion was drawn that if that a worker's needs are met the result is job satisfaction and conversely if the needs are not met. While this study is dated, it provided a basis for future research in the area in that it did demonstrate the importance of worker needs to job satisfaction.

The importance of worker job satisfaction is seen especially at a time when organizations are economically forced to find innovative products or strategies to survive. At times like these it is critical that the organization utilize all of the talent in a organization to its fullest, not just that of a chosen few, to provide optimal solutions to business problems. Those who derive the greatest satisfaction will be those whose needs have been met by the appropriate challenge. If the organization does not make optimal use of all of its human resources by not meeting the needs of its workers, job satisfaction may decline. This may cause the company to lose its competitive edge and eventually sacrifice market position or earnings. Low job satisfaction is ultimately detrimental to the organization since it translates into lost productivity and higher resignation rates with the resulting loss of valuable employees not to mention increased training costs due to turnover (French, 1990; Gomez-Mejia, Balkin, & Cardy, 1995). If allowed to continue, worker dissatisfaction can turn into labor unrest, theft, or even sabotage which would severely impair the organization (Andrisani, 1978). For these reasons, it is imperative that the company have a clear understanding of how to provide the proper challenges so that all employees experience optimal satisfaction with their jobs.

While the importance of job satisfaction is rarely debated, the importance of job satisfaction to overall worker performance is a controversial subject. There are those researchers who suggest that job satisfaction contributes to performance (Herzberg, Mausner & Snyderman, 1959; Mathis & Jackson, 1994; Pigors & Myers, 1969; Sorcher & Meyer, 1968) and those who believe it is performance which leads to job satisfaction (French, 1990; Lawler, 1973; Porter & Lawler, 1968). Researchers differ in their conclusion on whether job satisfaction differs by gender. Some researchers report no gender relationships to overall satisfaction while others report a difference. Many of those who report no difference in job satisfaction between men and women attribute it to the lower career aspirations of women (Brockner & Adsit, 1986; D'Arcy, Syrotuik & Siddique, 1984; Murray & Atkinson, 1981. The researchers believe this to mean that female workers derive satisfaction from similar job characteristics but that men place greater emphasis on job autonomy, challenge and opportunity than do women. There may also be a difference in what attributes of a job denote satisfaction for men versus women. Men tend to attach greater importance to extrinsic features of the job, such as pay, autonomy and security, and women attach greater importance to social aspects of the job and relations with supervisors with some emphasis on challenging work (Miller, 1980; Murray & Atkinson, 1981). Some researchers who report a difference attributes it to a perceived lack of career opportunities (Gomez-Mejia, Balkin & Cardy, 1995; Morrison & Von Glinow, 1990; Morrison, White & Von Velsor, 1987).

Further adding to the complexity of the concept of job satisfaction, several researchers have cited some key person-centered variables which may impact a worker's job satisfaction. Marital status and family size have been related to job satisfaction for married women and single parents having been shown to be less satisfied with their jobs than other women due to the external demands placed upon them by their family responsibilities (Gutek, Nakamura & Nieva, 1981). Age also influences job satisfaction in that the impact of stereotyping may be greater for older women than younger. These older women would be expected to lag behind younger women in career progress which may impact their degree of overall satisfaction. Younger women may be given more opportunities to advance which may have an impact on their overall satisfaction as well. In contrast, some researchers have found the opposite to be true (Janson & Martin,1982; Zemke, 1985), that job satisfaction for older workers is generally higher for older workers than for younger workers.

It should be noted at this point that while job satisfaction relates to the job performance or effort a worker exerts, it is only one of many variables which may offer explanation for the scarcity of women in upper ranks. By looking at only job satisfaction as a dependent variable it may also be considered a limitation of this study since other influences may exist. But, nonetheless, satisfaction derived from one's job, whether it be from internal or external rewards, does influence if that person stays with that particular job or profession. Lack of satisfaction with any aspect of a job can cause a decrease in effort and performance which will ultimately limit the career potential of that person.

Research Questions

Since the concept of job satisfaction is complex it makes sense to not only investigate it by itself but also with respect to other antecedent variables. In order to more fully investigate job satisfaction of managerial and executive women, the following research questions were examined within the context of the preceding analysis.
Research Question #1: What is the job satisfaction of managerial and executive women?
Research Question #2: What is the difference in job satisfaction between managerial and executive women?
Research Questions 3: How do the psychological variables relate to the respondent's job satisfaction?
Research Question 4: How do the personal variables relate to the respondent's job satisfaction?

Method

This study was designed to examine the job satisfaction and antecedent variables that contribute to job satisfaction in managerial and executive women employed in a variety of corporations. The subjects of the study consisted of a random sample of 1,000 managerial and executive-level women across the United States. The sample was drawn from the Dun & Bradstreet (D & B) Information Services database of more than 10 million companies. The search was further limited to businesses which have at least $5 million in sales and whose Standard Industrial Classification (SIC) code started with 20-89 to ensure similar organizational characteristics. The instruments included in the survey were the short form of the Bem Sex-Role Inventory (BSRI) used to assess the person's sex role classification, Rotter's I-E Scale for locus of control orientation, and the Job Descriptive Index (JDI) to measure the five different facets of job satisfaction. The demographic questions requested information about job level, job tenure, age, education level, life status, children at home and taken leaves of absence. The response rate for this study was 53%.

Bem Sex Role Inventory

Gender role was determined by the masculinity and femininity scales on the short form of the BSRI. The instrument is composed of 30 items, 10 relating to masculine characteristics, 10 to feminine characteristics and 10 filler items. The 10 filler items are determined to be socially desirable for both genders. Characteristics are scored on a scale from a low or "never or almost never true" (1) to high "always or almost always true" (7). An individual is considered masculine if the score on the masculine scale is higher than the median and the feminine score is lower than the median. The opposite is true for the feminine classification. Androgynous individuals score higher than the median on both scales and undifferentiated individuals score below the median on both scales

The BSRI has been subjected to intense methodological testing and it has stood as an instrument with internal consistency and reliability. The BSRI is an instrument that is not without its critics. Certainly, there have been many social attitude shifts in that time period and few will deny that we are more tolerant of behavior which is outside the norm for a given sex. But these cultural shifts have not been as evident in the corporate environment as shown by the statistics and review of the literature. The BSRI has also been assessed for its validity and has been found to still be a valid instrument for assessing gender roles (Holt & Ellis, 1998).

Rotter's I-E Scale

Rotter's I-E Scale is one of the most widely used instruments in the assessment of locus of control (Lefcourt, 1981; Rotter, 1990. This scale is a 29-item forced choice instrument which is used to determine the degree of influence one believes is had over one's life. Scores can also range to a high of 23, which would indicate the individual believes that all rewards are from external forces. In general, the higher the score, the more external the person is presumed to be. Several other scales have been developed for specific populations such as children, the elderly or infirmed. Rotter's scale was chosen for this study on the basis of it being proven sound over a wide variety of applications (Lefcourt, 1981).

Job Descriptive Index

Developed by Smith, Kendall and Hulin (1969) in a 10-year effort to produce a reliable and valid measure of worker satisfaction, the Job Descriptive Index (JDI) is one of the most recognized instruments for assessing job satisfaction (Iaffaldano & Muchinsky, 1985; Rasmussen, 1989). It is based on multiple facets rather than one global approach to job satisfaction. The instrument contains a total of 72 descriptor items which may be positive or negative in nature. There are five areas, or sub-scales, the JDI examines (the work itself, pay, promotions, supervision, and co-workers).

Extensive data regarding the validation of this instrument is presented in the authors' work Measurement of Satisfaction in Work and Retirement (Smith, et al., 1969, pp. 38-68). The JDI has undergone much testing as to its content validity, construct validity and reliability. These data would suggest the JDI is a consistent measure of job satisfaction. It is noted that this instrument is designed to examine job satisfaction at one given moment in time and may not be reliable over a long period of time. Like the BSRI, the JDI is not without its limitations. Since it was designed in the 1960's it may be somewhat dated given the recent interest in intrinsic job characteristics. Of the five sub-scales, only the work subscale and possibly the promotions sub-scales may be considered ones which reflect the intrinsic aspects of a given job. The other scales clearly are related to extrinsic characteristics. Even with this limitation, the JDI is a thoroughly tested instrument which has the ability to relate the employee's level of job satisfaction, which is why it was chosen for this study (Buckley, Carraher, & Cote, 1992).

The researcher attempted to examine the job satisfaction of the respondents with respect to several variables. Since the purpose of this study was to examine any differences which may exist between lower managerial and executive level women, the responses were examined with regard to job level. All of the antecedent variables were examined with regard to their impact on job satisfaction by utilizing t-tests, Pearson Product-Moment Correlation (PPMC) and regression.

Results And Findings

The results of this study are presented and analyzed with respect to each research question.

Table 1
Respondent Characteristics Mean Scores

Subscale	Manager	Executive	t-test	*p*
Job Satisfaction				
Work	36.86	41.44	4.57	<.001
Pay	38.65	45.99	7.35	<.001
Promotions	23.35	33.66	10.31	<.001
Supervision	38.56	43.36	4.80	<.001
Co-workers	40.09	44.04	3.95	<.001
Locus of Control	8.23	7.50	-0.73	.036
Gender Role – Undifferentiated	.16	.07	-0.10	.003
Gender Role – Feminine	.19	.09	-0.11	.002
Gender Role – Masculine	.32	.48	0.17	<.001
Gender Role – Androgynous	.32	.36	0.04	.401
Age	40.86	45.05	4.20	<.001
Children	.44	.48	0.04	.360
Leave of Absence	.29	.43	0.13	.003
Life Status	1.65	1.70	0.05	.264
Job Tenure	2.68	2.98	0.31	.012

Research Question #1: What is the job satisfaction of managerial and executive women? Table 1 presents the scores for both managerial and executive women within the context of each sub-scale of the JDI. The five sub-scales focus on satisfaction with the work itself, pay, opportunities for promotions, coworkers and supervision. It is believed that these five sub-scales measure five, mostly distinct, areas where one may be either satisfied or dissatisfied with the job at the same time. In other words, it is possible to be satisfied with the work itself yet dissatisfied with the opportunities for promotion or pay at the same time. Executives consistently scored higher through all five sub-scales indicating a higher level of satisfaction in these areas.

Research Question #2: What is the difference in job satisfaction between managerial and executive women? Table 1 also shows the difference in sub-scales scores for the two groups. This difference was least in the co-workers scale and greatest in the opportunities for promotion sub-scale. Female executives were more satisfied with their jobs than managers especially with the opportunities for promotion. The difference in this particular sub-scale, since it varies so much more than the others, might cause one to attribute more managerial dissatisfaction with a lack of opportunities for promotion.

From these findings, one might conclude that managerial women do have career aspirations that are at least equal to their executive counterparts. Frustration or dissatisfaction with the opportunities for promotion would indicate that there was an aspiration toward higher levels which is not being met. The inability to reach that goal may be causing the lower satisfaction scores.

Another conclusion which could be drawn from these results could be that women do not necessarily work for more intrinsic and social rewards as stated by some researchers (Miller, 1980: Murray & Atkinson, 1981). The scores for satisfaction with opportunities for promotion were lowest for both managerial and executive women. This indicates that women do need the outward recognition, autonomy, power and status that would accompany a promotion. The scores representing the differential in satisfaction with pay was the second greatest indicating that pay is an important issue to managerial women. Since pay is an obvious extrinsic factor, this would indicate further that women do find the extrinsic factors of a job important. The scores representing social aspects of a job (co-workers and supervision sub-scales) were higher and would support that there is more satisfaction with the social components of work. From this one could conclude that the social needs are more aptly being met or that these needs are of lesser importance when compared to such areas as pay.

Research Question 3: How do the psychological variables relate to the respondent's job satisfaction? Higher level executives were found to be more internally control oriented while managers were significantly more externally control oriented than executives (see Table 1). In correlating these scores to those for the job satisfaction sub-scales, we can see that the control orientation is significant to job satisfaction, more so for managers, in the negative direction (Table 2). This means that those who experienced greater job satisfaction scored low in control orientation, or had a more internal control orientation. Managers typically scored higher on control orientation, or were more externally control oriented, and lower on job satisfaction.

With regard to gender role, executives were consistently more masculine than the managers who were found to be more feminine and undifferentiated in their gender roles (Table 2). This finding would indicate a definite gender role difference between managerial and executive level women in this study. Further, a significant negative correlation to job satisfaction was also found for executives in the undifferentiated category (Table 2). This would indicate that executives who do not identify with any gender role category experience significantly lower job satisfaction in most sub-scales.

These findings would imply that the identification with at least some gender role is important to the individual seeking satisfaction with one's job. Also, since most executives were found to have a more masculine gender role, the stereotypical view of an upwardly mobile manager as being mostly masculine still would hold. The perception of a high-level executive is then consistent with past findings despite diversity initiatives and increased numbers of women in the workforce. Therefore, not much has changed in recent years as to our view of what traits executives should model.

Research Question 4: How do the personal variables relate to the respondent's job satisfaction? In the pay, work, supervision and co-workers sub-scales, the married individuals were more satisfied than most other status categories (Table 3). This was true for both managers and executives for the work sub-scale. This finding reflects the opposite of what is typically believed and that family responsibilities do not interfere with the satisfaction one can derive from a job.

Table 2
Psychological Variable Correlations with Job Satisfaction Sub-scales

	Work	Pay	Promotions	Supervision	Co-workers
Manager –					
Locus of Control	-.225***	-.223***	-.194***	-.180**	-.136*
Gender Role-Undifferent'd	-.141*	-.017	-.079	-.089	-.022
Gender Role-Feminine	.051	.006	.061	.019	.138*
Gender Role-Masculine	.107	.104	.062	.101	-.011
Gender Role-Androgynous	-.020	-.086	-.044	-.042	-.067
Executive					
Locus of Control	-.167*	-.201**	-.016	.028	-.054
Gender Role-Undifferent'd	-.212***	-.148**	-.233**	-.121	-.170*
Gender Role-Feminine	-.038	-.080	.023	.060	.008
Gender Role-Masculine	.030	.055	.002	.002	-.004
Gender Role-Androgynous	.104	.089	.110	.026	.099

*significant at the *p*=.05 level
**significant at the *p*=.01 level
***significant at the *p*=<.001 level

Table 3
Personal Variable Correlations with Job Satisfaction Sub-scales

	Work	Pay	Promotions	Supervision	Co-workers
Manager –					
Age	.314***	.143*	-.168**	.127*	.083
Children	.091	.023	.090	.092	.001
Leave of Absence	.086	.078	.077	.095	.014
Life Status	.227***	.161**	.050	.071	.089
Job Tenure	.229***	.191**	-.106	.086	.098
Executive					
Age	.289***	.125	-.234**	.073	.064
Children	-.037	-.118	-.041	-.065	.027
Leave of Absence	.030	.053	-.060	-.029	-.061
Life Status	.152*	.004	-.072	.128	.110
Job Tenure	.004	.183*	.163*	-.055*	-.115*

*significant at the *p*=.05 level
**significant at the *p*=.01 level
***significant at the *p*=<.001 level

Older women were found to have significantly higher levels of satisfaction in the work, co-worker, pay and supervision sub-scales. This was especially true for managers and not necessarily for executives. A significant negative relationship was found between the promotions sub-scale and age indicating that older workers were less satisfied with their opportunities for promotion which might be understandable.

Those executives who had taken a leave for any reason showed a significant relationship to having higher job satisfaction in the work sub-scale. No other significant relationships were found. This finding would suggest that there might no longer be a stigma attached to having taken a leave of absence.

In some sub-scales it is also shown that increased job tenure relates positively to job satisfaction. Staying longer in a job tends to be favorable for satisfaction with work, pay and promotions but it works negatively for the supervision and co-workers sub-scales.

Conclusions And Recommendations

In general, the findings of this research study offer some but few surprises. It was demonstrated that there was a significant difference in the job satisfaction of executive and managerial level women which is not as surprising as it is disturbing. The fact that such a significant difference exists ($p=<.001$) between the two groups is cause for concern that the work place is not meeting the needs of a large proportion of its work force. The lower satisfaction of these managers can result in decreased performance and frustration leading to that person's exit from the workplace. This would be costly for any company who intends to remain competitive.

Some promising results of the research are that women at managerial levels do feel a sense of satisfaction from the traditional extrinsic rewards since the lack of these rewards produced dissatisfaction. Women do value good pay, opportunities for promotion and the traditional perks which typically come with higher management levels along with a sense of accomplishment or challenge. Women also did not view their family or family obligations as causing conflict with their jobs. The fact that executives with families had greater satisfaction than those who did not leads one to believe that the family may provide a relief from the stresses a high level job. Equally promising is that the women who had taken a leave of absence did not feel less satisfied with their jobs or opportunities for promotion that those who did not. From this, it would appear that the woman who can make it into the upper ranks can "have it all". Or, since the women executives in this study were more masculine and internally control oriented, is this more the reinforcement of the prevailing stereotype? It would appear that the current female executive is a product of her environment and may not have really blazed new trails. She instead may have just learned to play the rules of an existing game where she allowed to join in.

In general, these findings represent the changes our society has undergone in recent years. Women are in the workforce to stay and are career-minded. They value many of the same rewards as men and they expect to be afforded opportunities to gain those rewards. Anything less will produce dissatisfaction and decreased performance. Confounding this, however, is the prevalence of the male stereotype for an executive which has not changed with society. While we may believe we are an enlightened society where discrimination and stereotypes are disappearing, the results posed here show this is not the case. It is clear that educators, trainers and practitioners need to focus more on the gender diversity initiatives already underway and perhaps revise them to more effectively address gender stereotypes. Any other course of action could result in an overall decrease in productivity and competitiveness for the organization and would have a detrimental effect on society in the long run.

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An Assessment of the Validity of the Natural Work Goals Profile

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The purposes of this study were to determine the construct validity and reliability of the Natural Work Goals Profile with respect to male junior and mid-level enlisted Army personnel. Research methods involved administering a satisfaction/dissatisfaction scale concurrently with the NWPG, conducting a test-retest method, and comparing participants' vitality ratings with ratings of overall effectiveness by participants' senior enlisted supervisors.

Keywords: Goals, Motivation, Vitality

There is a well-established body of literature distinguishing between worker satisfaction and worker motivation (Herzberg, Mausner, and Snyderman, 1959). Herzberg and his associates have asserted that some job factors lead to satisfaction, whereas other factors only prevent dissatisfaction, resulting in the position that satisfaction and dissatisfaction are separate continua. Nevertheless, the concept of satisfaction is consistently used to refer to conditions that lead a person to feel comfortable and contented with their work, which tends to reduce action. At the same time, Herzberg's research suggests that there is a difference between satisfaction or hygiene factors and motivation factors. Motivation is associated with intrinsic or internal job factors, while hygiene is associated with extrinsic or external factors to the job itself. Where hygiene factors are pretty much controlled by the organization and serve to reward adequate service, motivators are controlled by the individual and serve as the basis of action. The classic motivation factors, however, do not explain very well what accounts for enthusiasm, excitement, vigor, and the expenditure of high levels of energy on the job. The concept that does account for enthusiasm is called vitality (Miller, 1977; Harmon and Jacobs, 1985).

This research focuses on the elements of a vitalizing work environment and distinguishes between both hygiene and motivation elements. In other words, this is a study of vitality, and theoretically hygiene is not central to the concept, although vitality may be part of the domain of motivation. The characteristics of vitality tend to articulate the three leadership goals found in the U.S. Army's Character Development program for the 21st Century--team spirit, work performance, and values (U.S. Department of the Army, 1997). The purpose of the Character Development program is to enhance moral character and boldness in our nation's soldiers. The similarity of the goals of the military and vitality goals expressed in the literature of the business world raises the question as to whether military personnel express vitality in ways similar to other segments of the U.S. population.

A new instrument, the Natural Work Goals Profile (NWGP), was designed to measure goals that express vitality; it has been used in other studies (Pace, Regan, Miller, & Dunn, 1998), but not with a population of military personnel. The purposes of this study were to estimate the construct validity and the reliability of the Natural Work Goals Profile, using a population of junior enlisted and mid-level Army personnel in an artillery battalion at Fort Hood, Texas. Validity was assessed by comparing scores on the NWGP with a widely used and purportedly valid instrument, the Wood's Satisfaction/ Dissatisfaction Scale (Wood, 1973). The WS/DS was selected due to its prominence in motivation studies over the last two decades and its reliability and validity record (as summarized in Perkins, J.M., 1989). Following Herzberg's paradigm, Wood's instrument yields separate scores for motivation and for hygiene factors. Internal reliability of the NWGP was examined by a test-retest method. In addition, this study attempted to repeat a similar study of customer service representatives (Pace and Jaw, 1993) by determining the extent to which ratings of the overall effectiveness of soldiers were correlated with scores on the instruments.

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A Model of Revitalization

Work vitality, at its core, consists of the personal energy released by people in organizations. Thus, the key to revitalization rests in an ability to release the energy of members of organizations. The process of vitalization is quite likely rather complex and should be represented by a multiple-stage model. The model selected for this study (Pace, 1995) appears to provide a more realistic representation of the revitalization process than other models (Miller, 1977; Harmon and Jacobs, 1985; Harrison, 1987; Hawley, 1993; Kilmann, 1994; and Petrina, 1994). This model depicts six factors involved in vitality: (1) the work system, (2) work perceptions, (3) natural growth goals, (4) vitality, (5) outputs, and (6) feedback.

The model describes the way in which vitality emerges from elements of the work system through perceptions of work roles, is ultimately triggered by the possibility of achieving one or more natural work goals, and is sustained through feedback about the successful achievement of the goals. In a model of vitality, it is important to account both for factors such as elements of the work system that deter and facilitate the expenditure of energy and for factors, such as goals and task strategies, that trigger the release of energy by people in organizations.

The literature on the work system and how it affects expressions of vitality are legendary, ranging from Whyte's The Organization Man (1956) to Rifkin's The End of Work (1996), and includes Packard's The Pyramid Climbers (1962), Peter and Hull's The Peter Principle (1969), Townsend's Up the Organization (1970), Terkel's Working (1972), Naisbitt & Aburdene's Re-inventing the Corporation (1985), Bardwick's The Plateauing Trap (1986), Hammer and Champy's Reengineering the Corporation (1993), and Ambrose's Healing the Downsized Organization (1996). The list could be extended, but the point is made that organizations, bureaucracies, and work systems have mechanisms that stifle, muzzle, and deter the release of the natural energy possessed by their members.

Stage One in a concept of vitality, therefore, is the work system, and includes everything in the work environment, such as individual workers, the work itself, managerial or leadership practices, organizational structure, and organizational guidelines that smother, strangle, restrain, curb, repress, silence, mute, and generally extinguish most signs of energy being exhibited. In the military context, the work system includes individual soldiers, the chain of command, military occupational specialties, various leadership manuals, grade structure, and standard operating procedures. Elements of the work system have an impact on workers so as to result in either positive or negative work perceptions.

The effect of positive work perceptions is *con anima*, to act in a spirited manner or with spirit. We normally associate positive work perceptions with enthusiasm, animation, and energy. Positive work perceptions energize workers. Four work perceptions--performance, opportunity, fulfillment, and expectations--that relate to employee vitalized behavior have been identified by Pace (1995) and Pace and McGregor (1996). In addition, research by Thomas and Velthouse (1990) and Spreitzer (1995) have also revealed four similar perceptions that comprise the concept of "psychological empowerment" which may well be a synonym for vitality, since the four cognitions, in both studies, reflect people's orientations to their work roles and have very similar definitions.

Stage Two, therefore, consists of work perceptions. Workers' perceptions evolve over time as they experience the workplace and attempt to make sense of it in terms of their own particular personality and attitudes. Workers, therefore, can experience the same work conditions yet perceive them differently (Senge, 1990). The four basic work perceptions have the following characterizations:

Performance. What employees think about their ability to do their work at high levels of competence in the organization, referred to by Bandura (1977) as self-efficacy and by Druckman and Bjork (1994) as self-confidence, or Thomas and Velthouse's (1990) competence.

Opportunity. What employees think of the extent to which they can influence or have an impact in the organization (Kanter, 1976; Wheatley, 1981); this also involves feelings of optimism (Seligman, 1991), or Thomas and Velthouse's (1990) impact.

Fulfillment. How employees feel about the amount of autonomy and self-determination they have in the organization (Harrison, 1987; Kilmann, 1994); this also concerns a sense of having a choice in how their work is done in the organization (Hackman and Oldham, 1980), or Thomas and Velthouse's (1990) self-determination.

Expectations. How well employees feel their aspirations are being attained in the organization (Abel,1971), which also involves the meaning of work and how it matches workers' own standards and values (Hackman and Oldham, 1980), or Thomas and Velthouse's (1990) meaning.

In sum, vitality is defined as a psychological construct that is manifest by four cognitions or perceptions: performance, opportunity, fulfillment, and expectations. Together, these four perceptions of work reflect an active orientation to work roles and combine to create an overall construct called vitality in the workplace.

The third issue, which a model should represent, is the process by which work perceptions are released to affect the behavior of organization members in extraordinary ways. This part of the model was derived from research on the efficacy of goal-setting in triggering action. The goal perspective is summarized in the explanation that "once the individual has a goal and once he or she chooses to act on it, the three direct mechanisms—effort, persistence, and direction—are brought into play more or less automatically" (Locke and Latham, 1990, pp. 87-94). Locke and Latham (1990) also argue that "sometimes, however, these automatized mechanisms are not sufficient to attain the goal; the individual also has to engage in a process of problem solving in order to discover how the goal can be reached. This process involves discovering suitable task strategies. Task strategies are conscious or deliberate action plans motivated by goals." (p. 87).

Stage Three in the vitality process, therefore, consists of setting natural work goals. Natural work goals are the ideas, the aims, and the purposes that are innate or natural and which enable people to grow in capacity to produce, to serve, or to perform. Natural work goals give intensity, persistence, and direction to actions that result in people performing more effectively and efficiently than they did before the goals were set. Anything that diminishes or deters the achievement of natural work goals blocks vitality. Pace (1996, pp.19-20) identified twelve natural growth goals:

1. To stretch and work at one's highest level.
2. To use all of one's capacities.
3. To discover novelty by exploring new things.
4. To be a prime mover with a mission and calling.
5. To be totally involved in a project and reluctant to let others down.
6. To contribute to the well being of others.
7. To have one's efforts add up to something meaningful and significant.
8. To be free to effectuate one's own ideas.
9. To do things in one's own unique, personal, and individual way.
10. To have high aspirations for doing more than what seems possible.
11. To participate in the glory, pleasure, and pride of accomplishment.
12. To have a vision of achieving something worthwhile.

Past research affirms the power and necessity of intentionally setting personally meaningful goals in the workplace. Setting goals accesses great sources of personal energy (Gardner, 1963). Setting goals is a human need. Goals are required for human survival, happiness, and well-being (Locke and Latham, 1990). Natural work goals, even more than technical goals, provide for the survival, happiness, and well-being of workers or members of organizations.

The close interrelationship between the four work perceptions and the twelve natural work goals is indicated by the fact that each work perception is associated with three work goals. The natural work goals are derived directly from the work perceptions. Thus, in the military context as in others, the vitality that soldiers feel is revealed by their responses to how well the twelve natural work goals, derived from the work perceptions, are being achieved in their work roles in the organization. The assessment of natural work goals may, therefore, contribute to a better understanding of how well the Army's leadership goals are being achieved. The natural consequence of having positive feelings about the work environment and achieving natural work goals are high scores on the Natural Work Goals Profile. High scores indicate that workers are experiencing feelings of vitality.

Stage Four in the model simply indicates that proactive energy is being revealed as a consequence of positive work perceptions and achieved natural work goals. If large numbers of personnel have high scores, we may infer that the organization is vitalized. Vitalized organizations include many of the following features (Harrison, 1987, p. 10):

1.The organization involves the whole person.
2.Altruism abounds because people sense value in the work that transcends personal advantage.
3. People willingly labor long hours.
4. People anticipate what needs to be done without direction from superiors.
5. High morale, teamwork, and a sense of camaraderie exist.
6. People work with a sense of urgency.

In the military context, these characteristics represent the intent of the Army Core Values: loyalty, duty, respect, selfless service, honor, integrity, and personal courage (U.S. Department of the Army, 1997). The implication is that a vitalized Army is not only desirable but also critical for the future.

Stage 5, outcomes, is, therefore, the evolution of satisfied, often motivated, but now consistently vitalized organization members. The vitalized organization is the outcome sought. Within the military context, outcomes may relate to the Army's theme of job performance. Officers and enlisted soldiers alike must perform to a standard. Meeting these standards builds cohesion and trust among unit members (U.S. Department of the Army, 1997). However, a truly vitalized organization would certainly go beyond, as suggested above, meeting prescribed standards.

The sixth and final stage, feedback, describes the process whereby workers get information from the organization and learn about the results of their efforts to attain personal as well as organizational goals. Feedback, that confirms and reinforces goal accomplishments, signals to workers that their efforts are both appreciated and exceptional. On the other hand, feedback that fails to recognize the effectiveness of effort, leads workers to discouragement, discontentment, and lethargy. In the military context, feedback takes the form of "on the spot" corrections and informal counseling sessions, but it usually focuses on technical procedures and actions rather than on natural work goals. Such an emphasis can only lead to either satisfied or dissatisfied and possibly to motivated or de-motivated soldiers, but certainly not to vitalized soldiers.

In summary, the vitality model describes how a person's level of proactive energy is influenced by elements in the work system, the person's positive or negative work perceptions, and the person's ability or inability to achieve natural work goals in the work environment. Theoretically, the organization is responsible for assisting or at least allowing organization members to set natural work goals and for doing anything reasonable to enhance the achievement of those goals. With respect to the Army, the assessment of natural work goal perceived achievement may very likely assist leaders in evaluating progress toward achieving the Army's goals of team spirit, performance, and values.

Research Methods

The subjects in this study were male junior to mid-level enlisted soldiers (n=250) in an artillery battalion at Fort Hood, Texas. Fort Hood is the nation's largest Army post, which allowed for the selection of a cross-section of soldiers in many phases of a military career. However, there are two notable differences between this population and the Army at large:

1. The Army categorizes artillery battalions as "combat arms," which comprise only 13.6 percent of the Army, according to the Defense Manpower Data Center (U.S. Department of the Army, 1997).
2. There were no females represented in the study since the battalion comprises combat arms. Only 1.8 percent of soldiers serving in combat arms are female.

The sample for this study comprised 186 junior and mid-level enlisted members of an artillery battalion who attended a training session in May 1998 as part of preparing for peacekeeping operations in Bosnia-Herzegovina. Comparison of the demographic data of the sample with the general Army population in terms of age, civilian education, years in military service, and military occupation specialty (MOS) indicated two exceptions to comparability. First, higher-ranking soldiers tended to be absent from the training, causing the sample to be over-represented by junior enlisted soldiers; and second, there was an under-representation of Headquarters and Service Batteries.

Participants provided self-report measures on two instruments: the Wood Satisfaction/Dissatisfaction Scale and the Natural Work Goals Profile. The WS/DS assesses job satisfaction in terms of Herzberg's Hygiene-Motivation paradigm (Herzberg, Mausner, and Snyderman, 1959). The WS/DS was developed to address each of the hygiene and motivator factors. A review of literature over the last two decades indicates a preference for hygiene studies to focus on educators, resulting in terminology unique to educational institutions (Wood, 1973). Hence, it was necessary to adapt the WS/DS to unique military terminology. One anomaly with the WS/DS is that its title is misleading. As explained above, motivation and hygiene factors may be considered separate factors, each having their own scales. Motivation ranges from motivated to unmotivated, and hygiene ranges from satisfied to dissatisfied. Fortunately, Wood's Satisfaction/ Dissatisfaction Scale measures both factors. The Natural Work Goals Profile contains twelve natural work goal statements, derived from structured interviews and a literature review (Pace, Mills, and Stephan (1990). The Natural Work Goals Profile (NWGP) consists of two main sections in addition to a demographic section. The quantitative section asks for participants to rate attainment of each of the twelve natural work goal statements on a six-point Likert scale. The qualitative section queries participants for suggestions as to what in the organization is hindering natural work goals and considerations for reducing hindrances. Thus, the NWGP is capable of providing diagnosis as well as suggesting courses of action.

Five questions directed this research effort:

1. What is the reliability of the Natural Work Goals Profile as shown by the correlation between initial scores and follow-up scores two weeks later?
2. What is the correlation between scores on the Natural Work Goals Profile and motivation scores on the Satisfaction/Dissatisfaction instrument?
3. What is the correlation between scores on the Natural Work Goals Profile and hygiene scores on the Satisfaction/Dissatisfaction instrument?
4. In the presence of other predictors, what will the strength of correlation be between motivation scores and NWGP scores, and between hygiene and NWGP scores?
5. What is the correlation between scores on the Natural Work Goals Profile at the initial survey time and overall effectiveness ratings on a six point and a three-point scale?

In May, 1998, the Natural Work Goals Profile (Pace & McGregor, 1996) and the Wood's Satisfaction/ Dissatisfaction Scales (Wood, 1973) were administered to members of an artillery battalion stationed at Fort Hood, Texas, during a mandatory training session. The qualitative and demographic data from the survey session were then coded, entered, and analyzed using SPSS. The qualitative data is beyond the scope of this report.

Results and Findings

The research procedures were designed to estimate construct validity and reliability of the NWGP. Construct validity can be indirectly assessed through convergent and discriminant analysis. Convergent validity is the ability of a set of scores to focus on the target construct. Discriminant validity is the ability of a set of scores to differentiate the construct being studied from similar constructs. Research Questions 1, 2, 3, and 5 were addressed by finding Pearson's product-moment correlation coefficients. Research Question 4 was addressed by conducting a series of regression analyses. The results may be summarized as follows:

Research Question 1. The test-retest correlation of .57 shows a relatively low coefficient of reliability, thus, the answer to question 1 is that the test-retest reliability is weak.

Research Question 2. When motivation scores (MOTIV) are correlated with NWGP scores, the correlation coefficient is 0.671, a value significant at the .01 level of confidence. This suggests that there is a relatively strong relationship between natural work goals and the motivation factors.

Research Question 3. When hygiene scores (HYGN) are correlated with NWGP scores, the correlation coefficient is 0.585, a value significant at the .01 level of confidence. This suggests that there is also a relationship between natural work goals and the hygiene factor, although weaker than with the motivation factor.

Research Question 4. Several test runs were conducted of predictor variables as to their strength in predicting vitality (see Table 1, Results of Regression Analyses). The first run was a stepwise regression that resulted in the sole inclusion of the motivation factor where its partial equaled 0.6707. A second run consisted of a regression by progressive entry, one predictor at a time. Motivation scores (MOTIV) were entered first, followed by civilian education level (EDUC), hygiene scores (HYGN), number years of military service, and military grade. Adding predictors beyond MOTIV constituted no additional value based on significant F change. A third run was performed using only hygiene and motivation in a single block. Their respective partials were hygiene at .1018 and motivation at .4154. A fourth run was performed in progressive blocks with motivation entered first and hygiene second. An F change of .1678 indicated that hygiene was not significant after motivation was entered. A fifth run was performed in progressive blocks with hygiene entered first and motivation second. The results indicated a significant addition even after hygiene was entered. These results suggest that the motivation factor is the strongest predictor of scores on the Natural Work Goals Profile.

Research Question 5. Neither the six-point evaluation of effectiveness (R = .09, n.s.) nor the three-point evaluation of effectiveness (R=.048, n.s.) revealed statistically significant correlations with scores on the Natural Work Goals Profile. These results suggest that scores on the NWGP have only a weak relationship with ratings of overall effectiveness.

Conclusions

Vitality was postulated to be a set of factors that were related to but independent of traditional motivation concepts. The data from this study suggests that the original assumptions may not have been as accurate as desired. One explanation may be that Army ratings of soldier effectiveness are based on criteria that do not reflect vitality of the soldiers. If the Army's concern about the Character Development level of soldiers is a reality, then it follows that the criteria used in rating solders must reflect sources of vitality. At the present, ratings of soldiers apparently do not capture the essence of vitality. This may be an issue that needs looking into as part of the effort to cultivate moral character, boldness, and audacity in contemporary soldiers.

Scores on the Natural Work Goals Profile were more strongly correlated with motivation scores from Wood's Satisfaction-Dissatisfaction instrument than they were with hygiene scores. The data suggest that natural work goals are more a part of the specific domain of motivation factors, than they are of hygiene factors. Additionally, each of the five regression analyses identified motivation scores as the superior predictor of NWGP scores. The implication is that scores on the NWGP tend to reflect the concept of motivation more than satisfaction. This is consistent with earlier assumptions and supports the general claim that the NWGP is in fact measuring a motivation factor, strengthening the case for construct validity.

Table 1.
Results of Regression Analyses

Regression Analysis Type:	R Sq.	S.E.	F Score	Sig. Of F
1. Between MOTIV and NWGP				
MOTIV	.449	7.096	150.48	.0000***
2. By Progressive Entry One Predictor at a Time				
MOTIV	.449	7.096	150.48	.0000***
EDUC	.460	7.048	70.04	.0619
HYGN	.464	7.041	52.56	.2494
Years in Service	.468	7.053	31.72	.2711
Military Grade	.468	7.072	26.28	.9603
3. Using Only MOTIV and HYGN in a Single Block				
HYGN and MOTIV	.455	7.078	76.576	.0000***
4. Progressive Blocks with MOTIV First and HYGN Second				
MOTIV	.449	7.096	150.486	.0000***
HYGN	.456	7.078	76.576	.1678
5. Progressive Blocks with HYGN First and MOTIV Second				
HYGN	.342	7.760	95.665	.0000***
MOTIV	.456	7.078	76.576	.0000***

* $p < .05$. ** $p < .01$. *** $p < .001$

Contribution to New HRD Knowledge

The issue that remains concerns the extent to which scores on the NWGP actually target the higher levels involved in motivation and could be identified as a separate factor called vitality. The question is whether vitality and scores on the NWGP, within content theories of motivation (represented by Maslow, Alderfer, and Herzberg), are a function of trying to satisfy higher-level needs, such as the social, esteem, and self-actualization. Then, within process theories of motivation (represented by expectancy and equity theories), do these results provide additional support for the validity of goals and expectations in bringing about action? Nevertheless, the identification of natural work goals may be an important refinement in our views of what releases energy and enthusiasm in the workplace.

"Motivation" is still one of the key topics that appear on the agendas of managers and leaders in organizations. Even with all of the theorizing and efforts to translate principles of motivation into useful management practices, human resource development specialists are still quite puzzled about how to move organization members from lethargy to action. The most common methods continue to be those derived from behavioral models that use the infamous cattle-prod method or the carrot and the stick. Those approaches are still somewhat ineffective, and fail to sustain so-called motivated behavior.

Making a shift in paradigms from motivation to vitalization may open the way to think about "motivation" as aiding people in the achievement of natural work goals rather than as kicking, goading, pushing, shoving, wheedling, cajoling, and trying to cause people to act. To paraphrase Harrison (1987), you cannot design a work system that compels enthusiasm. Serious consideration of a natural work goals approach to enhancing worker performance may be just the thing for the year 2000 and beyond.

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Leveraging System Factors for Increased Training Effectiveness

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World wide, training costs are staggering. The level of expenditure begs the question, "How can organisations ensure that this money is well spent -- that the training is effective?" This conceptual paper critiques current training design models, and the lack of attention to system factors. We show how attention to system factors can be integrated with a popular instructional system design (ISD) model, and raise questions to help future researchers more comprehensively address this issue.

Keywords: Training design, System factors, Training effectiveness

We do not yet know what the total global training bill will be for the year 2000, but *five years ago* estimates were that over 50 billion dollars per year were being spent on training in the US alone (Nelson, Whitener, & Philcox, 1995). In 1998, it was reported that this figure had soared to over 60 billion dollars (Bernstein, 1998). In 1999, we were told that Dow Chemical alone had an annual training budget of 80 million dollars (Briody, 1999). One author has suggested that global training expenses just for information technology will reach 18.5 billion US dollars in the year 2000 (Violino, 1999).

Considerable time and attention is given to the issue of producing effective training. This is understandable, since anecdotal evidence indicates that companies who spend more on training are more profitable (Sorohan, 1995; Cole, 1998) and describes some very high returns on training investment (Simington, 1998). However, others claim that $80 out of every $100 training dollars is wasted (Maglitta, 1997). If we accept this latter claim as even *partially* correct, this is an issue that should be of significant concern to both scholars and practitioners because it indicates much of our training effort is ineffective. We believe one major contributor to ineffective training is lack of attention to the system factors that can undo the benefits of otherwise well planned and executed training. This lack of attention to system factors is directly contrary to what we know about the link between training effectiveness and system factors from the transfer of training literature (Tharenou, 1995; Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanaugh, 1995; Brinkerhoff & Montesino, 1995; Machin and Fogarty, 1997). The literature makes it clear that the system in which the training must be applied will significantly impact results on the job.

It has been said that if we put a good performer in a bad system, the system will win every time. We suggest a variation on that theme. "Return a well-trained employee to an unprepared system, and the training dollars may well have been wasted." We define the term "system factors," for purposes of this paper, as those things in the work environment that influence employees' work-related behaviours, and "the system" as those factors in their entirety.

The object of training is normally to enhance employee skills and knowledge with the aim of improving performance. Therefore, we begin the paper with a discussion of employee performance with particular emphasis on the importance of system factors. The design of the training is discussed next. Instructional systems design in general is discussed, and the major components of one popular ISD model are reviewed, as a vehicle for pointing out how system factors are typically *not* taken into account in training design. We then review transfer of training literature to show that the lack of emphasis on system factors impacts upon the effectiveness of the training produced with our normal design approaches. This is followed by a discussion of key system leverage points that we believe must be considered in training programme design, and that we believe will lead to increased transfer of training and improved performance. We show how these can be integrated with a popular ISD model, and conclude the paper with questions for future research that are raised by the integrated model.

Employee Performance and the Importance of Person and System Factors

The literature of the past few years indicates emphasis in business organisations on reinvention, reengineering, and transformation, all in the pursuit of enhanced employee and organisational performance (Hammer & Champy, 1993; Passmore, 1994; Redding & Catalanello, 1994; Rummler & Brache, 1995).

HRD scholars continue to investigate various aspects of employee performance. Ruona and Lyford-Nojima (1997) identified over a score of the authors and researchers who have provided foundational and research work to

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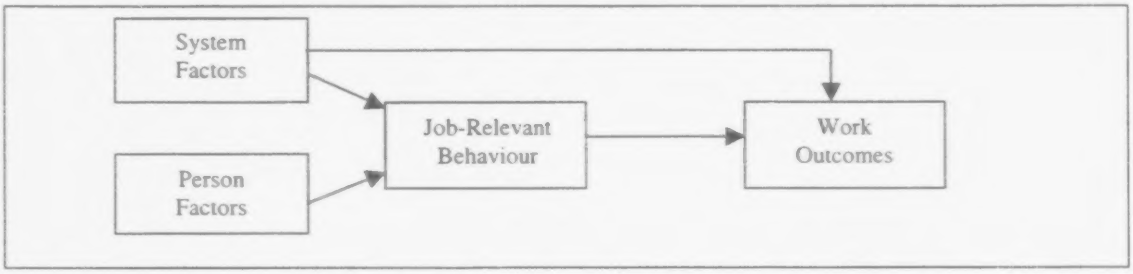
help us understand major variables that contribute to employee performance such as mission/goal, systems design, capacity, motivation, and expertise.

Both person-specific factors and system-related factors are critical to performance. Carson, Cardy, and Dobbins (1991) presented a model that demonstrates this interaction, shown in Figure 1. The authors divided employee performance into two categories, job-related behaviours and work outcomes. Their model showed that system factors in the work environment impact both behaviours on the job and work outcomes. They believed system factors have both a potentially positive influence and the potential to constrain performance.

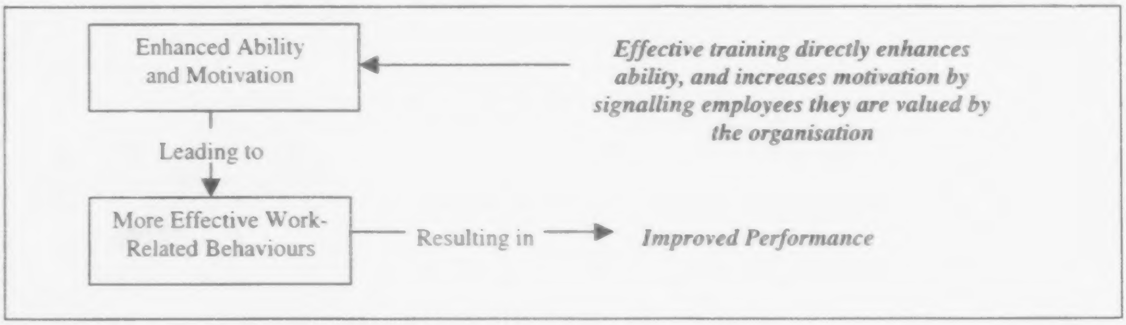
This model is very similar to the approach of Gilbert (1996). Gilbert defined performance as a function of both behaviours and accomplishments. His Behaviour Engineering Model indicates that work environment (system) factors as well as individual factors impact employees and their performance. Other authors have recognized that system factors as well as person factors can influence performance as well (Bernardin, 1989; Blumberg & Pringle, 1982; Ilgen and Favero 1985; Olson & Borman, 1989; Peters, O'Connor, & Eulberg, 1985).

Figure 1. Relationship of Person and System Factors to Two Domains of Performance


System Factors
Job-Relevant Behaviour
Work Outcomes
Person Factors

Person Factors. A person-factor perspective of performance (Hellriegal, Slocum, and Woodman, 1995) can be shown as Performance = f (ability X motivation). From this perspective, performance comes directly from employee behaviours, which in turn are a function of motivation and ability. Effective training is one of the major tools for increasing motivation and ability, as shown in figure 2.

Figure 2. The Impact of Training on Person Factors that Contribute to Performance

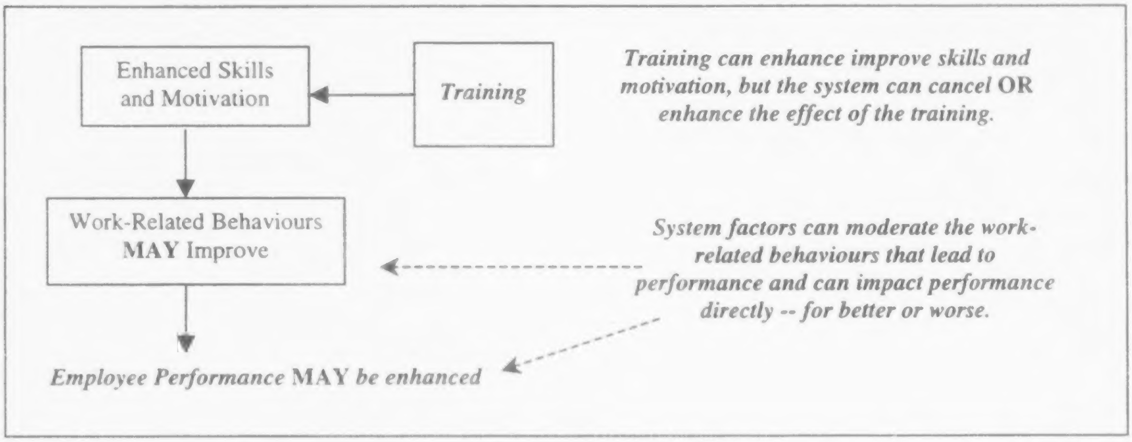

Enhanced Ability and Motivation
Effective training directly enhances ability, and increases motivation by signalling employees they are valued by the organisation
Leading to
More Effective Work-Related Behaviours
Resulting in
Improved Performance

Person-factors have been the subject of considerable study. Text books on organisational behaviour typically contain both content and process theories that seek to explain the motivation aspect of the person-factor focus (Hellriegal, Slocum, & Woodman, 1995; Ivancevich, & Matteson, 1987; Kreitner & Kinicki, 1998). The "big five" personality dimensions have been examined in this regard (Barrick and Mount, 1993; Kreitner and Kinicki, 1998). Welbourne, Johnson, and Erez (1998) developed a role-based performance scale, using role theory and identity theory to develop a measure of performance. Stajkovic and Luthans (1998) have approached individual performance from the perspective of social cognitive theory and its derivative, self-efficacy. However, employee performance, as Carson, Cardy, and Dobbins (1991) noted, is not just a function of the person. Person factors such as skill and knowledge are important, certainly, but they are not the whole story. In fact some take the position that person factors are a *minor* factor in determining employee performance.

System Factors. Gilbert stressed that work environment issues influence human performance much more heavily than individual issues (Gilbert, 1996). Total Quality Management (TQM) theory as espoused by Deming (1986) also takes the position that most of what determines human performance is out of the individual employee's hands. System factors that can influence performance have also been studied extensively. Thompson (1993) advocated expanding the performance formula to be expressed as performance = f (skill + effort) * (efficacy of system being used), and suggested that in order to improve performance with the least investment of resources, the investment should be in the system. Employee involvement in planning, overall organisational culture, perceived organisational support, and perceived empowerment have all been found to be significantly related to various measures of employee performance (Black and Gregersen, 1997; Shore and Wayne, 1993; Fulford and Enz, 1995). Arthur (1994) examined steel "minimills" and found that those with "commitment" vs. "control" human resource systems had higher productivity. These examples all point to system factors exerting an influence on work-related behaviours and performance.

System factors can influence not only the employee work-related behaviours that lead to performance but outcomes directly, as shown in figure 3. An obvious example of this latter influence is simply whether or not employees have the *opportunity* to apply the newly learned skills. Skills and knowledge generally have to be applied in a specific system – and that system must support the training objectives for those objectives to be realised. Otherwise, the training will not be transferred into the workplace, in terms of application on the job.

Figure 3. A More System-Focused View of Training and Performance


Enhanced Skills and Motivation
Training
Training can enhance improve skills and motivation, but the system can cancel OR enhance the effect of the training.
Work-Related Behaviours MAY Improve
System factors can moderate the work-related behaviours that lead to performance and can impact performance directly -- for better or worse.
Employee Performance MAY be enhanced

If system factors are critical to performance, then logically they should be taken into account in designing training programmes that are intended to result in increased performance. But are they? We turn now to a discussion of instructional systems design to explore this question.

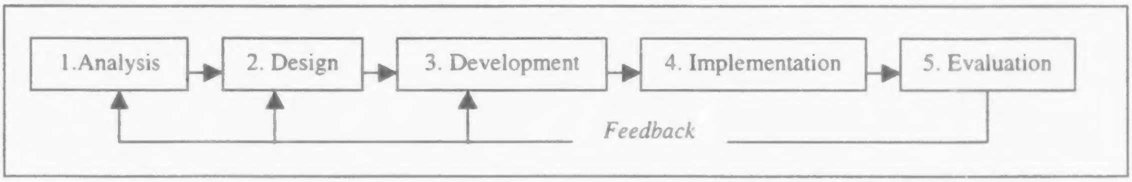
Instructional Systems Design (ISD) and the Degree of Importance given to System Factors

The definition of instructional systems design, also known as instructional design (Rothwell and Kazanas, 1992), continues to evolve. Richey (1986, p. 9) defined instructional design as "the science of creating detailed specifications for the development, evaluation, and maintenance of situations which facilitate the learning of both large and small units of subject matter." Gagne', Briggs, and Wagner (1992, p. 20) offered additional useful definitions. They consider *instructional systems design* the systematic process of planning instructional systems and *instructional development* the process of implementing the plans. Together, the two functions are components of what they term *instructional technology*. Romiszowski (1981) discussed how the systems approach began to be used in training and education in the late 1950s and early 1960s, and notes that all that was new was the systematic methodology; the general approach is as old as the scientific method itself. Also, he conceptually positioned *instructional technology* as existing within performance technology, which in turn exists within human resources management technology.

Many ISD models have been proposed. Tennyson and Foshay (1998) summarised ISD models since the 1960s and noted, "There are hundreds of specific ISD models" (p. 65). They categorised ISD models into four "generations" based on a common set of system attributes and described the evolution of models from the first to the fourth generation.

One popular design model is the "ADDIE" model, for analysis, design, development, implementation, and evaluation, which Schlegel (1995) has referred to as the "generic" model. Some believe ADDIE has outlived its usefulness and should make way for more up-to-date models that are less linear and behaviouristic (Gayeski, 1998). Tennyson's fourth generation ISD (ISD^4) would be such a model (Tennyson, 1999). The ISD^4 approach is certainly more dynamic and interactive and less linear in design; it can accommodate constructivist as well as behavioural theories of learning, and is more inclusive. It is also more situational, in terms of tailoring an approach to fit the specific training situation (Tennyson & Foshay, 1998). However, we suggest that while ISD^4 models feature major changes in the areas Gayeski (1998) discussed, the fundamental activities of ISD^4 models appear to be the same as those in the ADDIE model. That is, we are still concerned with determining what training is needed and establishing objectives, designing and developing the training, and implementing and evaluating it. What appears to have changed is how effectively we carry out those activities, particularly in terms of flexibility and situational responsiveness. Since we are concerned here primarily with *what* is done during training design -- the major activities -- the ADDIE model is still quite useful for illustration purposes in considering the problem under discussion. A simplified version of the model is shown in figure 4.

Figure 4. The ADDIE Model for Instructional Design (Simplified)



Romiszowski (1981) cautioned that any flow chart-type model (such as figure 4, above) could be ineffective and even misleading in attempting to present a systems approach. The systems approach to problem solving is heuristic, not algorithmic. Analysis, design, and evaluation, rather than being highly sequential, will be occurring at all stages of the process. The concerns of Romiszowski and Gayeski not withstanding, ADDIE remains a popular model for a basic view of ISD. We acknowledge that its application in practice is more complex than figure 4 might lead one to believe, but stand by our position that it represents the major design activities. We will examine each of the model's five major phases in terms of the extent to which each phase does or not recognise system factors.

Analysis. A number of approaches have been advocated for the analysis phase of ISD. Scott and Deadrick (1992) advocated the use of nominal group technique at the organisation, operations, and person level. McClelland (1993) discussed the use of individual interviews, focus groups, on-site observations, and in general, advocates an open systems approach that uses many sources to develop training needs information. Regardless of the approach used, the intent is generally to determine the specific skills and knowledge issues that training must address and establish goals and objectives based on those issues. Some have broadened that approach. Sleezer (1993) indicated that using a systems approach might lead the analyst to recognise that the problems under study have multiple causes and solutions. Rossett (1987) noted that the training needs assessment might surface causes for which training is not the solution. Front-end analysis (FEA), first popularised by Harless (1973, 1975, 1989), is often used at the analysis stage to see if the problem is, in fact, in the system. However, FEA is often concerned with a person *or* system focus rather than a person *and* system focus. We believe a major concern in analysis should be about finding the system intervention(s) that should go *with* person-factor interventions such as training.

Design, Development, and Implementation. When the above analysis phase indicates training is the appropriate response to the problem, one proceeds with design, development, and implementation phases of ISD. Tennyson and Foshay (1998) commented that ISD has become much more dynamic and iterative as it has evolved. They discussed how what they describe as the "ID domains" (p. 70) have grown from basic design activities and production of materials to include implementation and maintenance. Fundamentally though, ISD still reflects a person-factor approach in these phases, concerned with producing programmes that will best enhance the skills and knowledge of those who participate in the training. Systematically designed training will take system factors into account, but typically will not make changes in the system part of the design.

Evaluation. The last step in the design process is evaluation and, as with the other phases, there is no shortage of literature on the evaluation of training. Dionne (1996) reviewed 20 years of the literature and noted how evaluation of training had progressively become of more concern for trainers, managers, and researchers.

Kirkpatrick (1996) revisited the 4-level model he first introduced in 1959 (reaction, learning, behaviour, and results) and concluded that the content had remained much the same. Kraiger, Ford and Salas (1993) have indicated there are no theoretically based models of training evaluation and proposed a classification scheme of learning outcomes and associated evaluation measures as a move toward such a model.

Recognition of system factors is not absent from the evaluation literature. Holton (1996) argued that a proper evaluation model should account for the effect of intervening variables that affect outcomes, and indicate causal relationships. He included transfer of training conditions as a primary intervening variable. Evaluation, as reflected in the ISD models discussed above, generally does not meet Holton's criteria with regard to considering the intervening variable of transfer of training conditions.

Effective Transfer of Training. This lack of attention to system factors in ISD runs directly counter to what we know about the link between training effectiveness and system factors from the transfer of training literature. Tharenou (1995) found that in an Australian federal agency, supervisor support enhanced training effectiveness. Rouiller and Goldstein (1993) concluded that the organisational transfer climate of the work situation affects the degree to which learned behaviour will be transferred onto the actual job. Tracey, Tannenbaum, and Kavanaugh (1995) found that both climate and culture were directly related to post-training behaviours. Brinkerhoff and Montesino (1995) found significantly higher training useage among trainees who received two management support interventions, a pre-training expectation discussion and an after-training follow on discussion. Machin and Fogarty (1997) noted that, "When a lack of support is evident or a lack of opportunity to perform trained tasks exists, these factors may inhibit the transfer of training" (p. 102).

It appears there has been a failure to transfer our knowledge of the impact of these system factors on the effectiveness of training into instructional systems design. This problem has been raised in the past. Robinson and Robinson (1985) stressed the need to conduct a work environment assessment to uncover barriers to skill transfer in the work environment before training begins, and the need to work with line managers to remove these barriers. Baldwin and Ford indicated in 1988 that research gaps included the need to test operalisations of training design and work environment factors that have an impact on transfer. We were unable to find published evidence to show that the work environment factor research gap noted by Baldwin and Ford has been closed.

Leveraging System Factors for Improving Training Transfer and Performance: An Integrated Model for More Effective Training Design

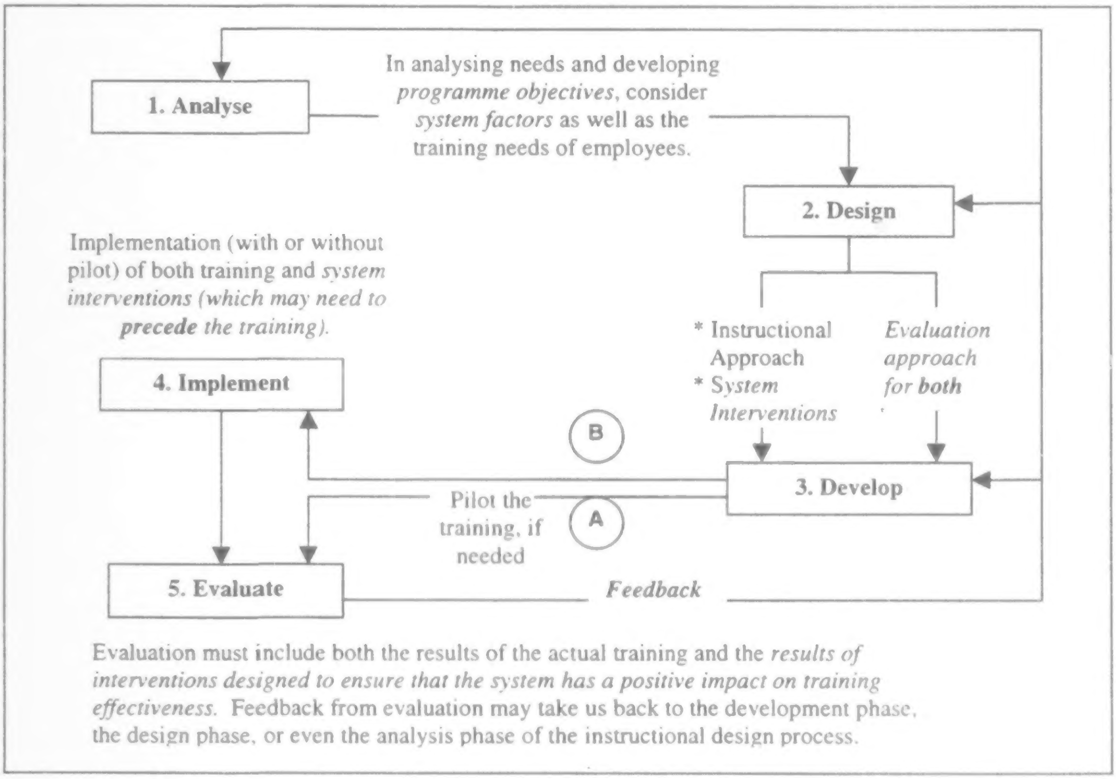
We propose that three system factor leverage points need to be taken into account in training design models. We believe these system factor leverage points are:

1. The initial training needs assessment that must include an *assessment of the system* in which the training will be applied. In particular, factors that will tend to cancel the impact of the training must be identified and *system factor objectives* defined, along with training objectives.
2. The *design and implementation of system interventions* is needed to deal with any factors that have been identified as potentially cancelling the impact of training. Intervention implementation should occur prior to or concurrent with training. Consideration should also be given to system interventions designed specifically to *enhance* the impact of training.
3. The evaluation phase must include evaluation of system interventions plus *evaluation of system impact on training transfer*. Any factors in the system that are interfering with training transfer need to be identified as quickly as possible, so corrective interventions may be taken before the value of the training is lost.

System leverage point consideration should be viewed as an *integral part of the ISD process*, a matter of routine in good design. The integrated model below offers one example of how this might be done. The main difference between these three points and what we already know about systematically designed training is that we are advocating system intervention as a primary component of training design, not just taking the contextual situation into account in design. Richey (1992) has noted the need for designers to take context into account, perhaps with additional learning activities that provide role models and emphasise the positive consequences of the desired behaviour. She also suggested management briefings and involvement in the training, and we know this is important from the training transfer literature. While taking the system into account is commendable and important, we believe there is a need to work more directly with the system itself. In other words, go beyond just customising the training to fit the system. Certainly training should fit the system, but at the same time we should focus on *enhancing* the system to increase the effectiveness of training.

Figure 5 shows how consideration for the system leverage points can be integrated with the normal ADDIE design phases.

Figure 5. The Integrated Design Model Reflecting System Leverage Points


1. Analyse
2. Design
3. Develop
4. Implement
5. Evaluate
* Instructional Approach
* *System Interventions*
*Evaluation approach for **both***
Pilot the training, if needed
B
A
Feedback

In analysing needs and developing *programme objectives*, consider *system factors* as well as the training needs of employees.

Implementation (with or without pilot) of both training and *system interventions (which may need to **precede** the training).*

Evaluation must include both the results of the actual training and the *results of interventions designed to ensure that the system has a positive impact on training effectiveness.* Feedback from evaluation may take us back to the development phase, the design phase, or even the analysis phase of the instructional design process.

Conclusion and Questions for Further Research

At the beginning of this paper we suggested that if we return a well-trained employee to an unprepared system our training dollars might well have been wasted. Another option is possible. We can return well-trained employees to systems that have been prepared to receive them; systems that are prepared to reinforce that training and put it to use. To improve the effectiveness of our training, we need to integrate key system leverage points into the instructional design process. Well-designed training can be a major contributor to performance, but if we forget the system factors it is unlikely that contribution will be maximised. For that reason we stress the need for integrated design models, reflecting system leverage points at key steps of the design process.

The challenge we suggest faces HRD scholars is to go beyond the simple conceptual model offered here, and develop more detailed and comprehensive integrated ISD models. Such models are needed to guide us in designing training programmes that take the relevant system factors into account, that prepare the system to accept and enhance the training, and that result in increased training transfer and improved employee performance.

In developing these more comprehensive models, we believe questions for further research will include:

1. How can training needs assessment be modified to include an appropriate assessment of the system in which the training must be applied, in order to determine both those system factors that could inhibit training transfer and those that could enhance it?
2. What interventions will be most effective in preparing the system to ensure that employees are able to make the best use of training when they return to the work setting in which they must apply the training?
3. What practical evaluation techniques can be developed to enable us to identify the impact of the system on attempts by employees to put their training to use, and the impact of the system on performance in ways that are unrelated to the training?

If we can answer these questions, we can help to ensure that we are producing effective training and that our training dollars are being well spent.

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Establishing Internal Quality Benchmarks for the South Carolina Fire Academy

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When South Carolina dedicated its $23,000,000 fire training facility to replace an existing 20 year old complex, a unique opportunity was presented to create an internal performance benchmark that would document students' satisfaction with the quality of training at the beginning of program delivery. The new South Carolina Fire Academy's (SCFA) motto, "A Center of Excellence" is a public statement by the Academy that is intended to meet the expectations of its customers.

Keywords: Performance Benchmarking, Evaluation, Performance Measurement

Benchmarking is recognized as an invaluable tool to create a competitive advantage (Spendolini, 1992). During a review of literature, it became apparent that no other statewide training organization had benchmarked its student satisfaction through the use of statewide survey methodology.

All training academies contacted during this study indicated that they rely on individual post-course evaluations specific to just-completed training. Therefore, the South Carolina Fire Academy could have a competitive advantage over other national training centers if customer (student) satisfaction is assessed using a more comprehensive strategy and the results are incorporated in making management decisions about program quality (Watson, 1996). Program evaluation activities need to focus on product delivery and mission accomplishment instead of theory building. Its essence is to provide feedback leading to a successful outcome defined in practical, concrete terms (Isaac and Michael, 1995). A strong customer orientation is critical if successful selling of Academy firefighter training is to be based on quality, not price, as perceived by customers/students (Peters and Waternam, 1991).

Problem Statement

The purpose of this research is to focus the resources of the South Carolina Fire Academy and unify the scope of operation by establishing an internal benchmark of customer satisfaction that could be used as a baseline for future comparisons.

Based on prior objectives, the South Carolina Fire Academy has developed an instructional delivery system through a standardized statewide firefighter training curriculum in order to train a maximum number of career, volunteer, and industrial fire service personnel. The goals of the SCFA have been to:

1. Develop the skills necessary to command and control emergency operations involving fire, rescue, and hazardous materials incidents.
2. Develop managerial and leadership skills for all levels of fire officers.
3. Develop skills in fire department support functions to include public fire education, fire prevention, inspections, and fire investigation (LLR Division of Fire and Life Safety, 1996).

The staff of the new South Carolina Fire Academy is committed to quality. Each member of the staff and faculty of the SCFA is dedicated to providing the highest level of service possible in the delivery and support of training to SCFA students and fire service personnel (LLR Division of Fire and Life Safety, 1996).

Customer satisfaction is listed as one of the four values of the Academy. Therefore, an initial internal benchmark of student satisfaction established during the earliest feasible period of operation of the new South Carolina Fire Academy could provide important feedback on how well the Academy meets the stated commitment to quality and customer needs. Further commitment is identified by the Executive Committee of the South Carolina State Firemen's

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Association who voted unanimously to fund the research to establish internal quality benchmarks and to join into a partnership with the Academy on the project

Theoretical Framework and Research Questions

The research was conducted based on an internal benchmark approach. The benchmarking process was designed to assess the quality of the SCFA's training programs based on input from trainees (students) attending the *new* South Carolina Fire Academy during its first five months of operation. This study was designed to establish an internal benchmark of customer satisfaction that could be used as a baseline for future comparisons. Evaluation of fire training in the context of expectations is relevant to this study, in that, the student completing training is the output of the Academy and the input to the organization represented by the student. Similarly, training as a process must respond to feedback in order to adapt to weaknesses and changing needs where feedback is controlled by the evaluation criteria chosen by the Academy.

According to Gay (1992), a strategy of continuous improvement based on benchmarking requires that the opportunity to improve be evident to everyone involved with the process being benchmarked. In the case of the new South Carolina Fire Academy, a benchmark score of 13 out of a possible 15 represented a relatively high benchmark achievement level. However, even if the higher benchmark score is obtained, the potential for quantitative and qualitative improvement in customer satisfaction would still be possible. With cooperation from the Superintendent of the Academy and identified experts in the field of fire training, the focus of this investigation was formalized in the following statistical question.

Statistical Question: Utilizing the *South Carolina Fire Academy Customer Satisfaction Survey*, the benchmark mean satisfaction score of the new South Carolina Fire Academy is equal to or less than 13 on a scale of 0 to 15. Thus,

H_o: $\mu \leq 13$

H_a: $\mu > 13$

The null hypothesis would be rejected if the probability of the t-value was less than the one-tailed .05 probability of the critical value. Additionally, the following subsidiary questions are also addressed in the study.

Subsidiary Question #1: What, if any, was the difference in student satisfaction between the seven established Regional Training Centers of the Academy?

Subsidiary Question #2: Was there a significant difference in student satisfaction with the Academy training administration, curriculum, and instructors?

Subsidiary Question #3: Did the type of fire department (career, volunteer, combination, or industrial) make a significant difference in how firefighters rated the Academy?

Subsidiary Question #4: Did the number of courses attended during the study period influence student satisfaction with the Academy?

Methodology

The methodology of this study included a mail survey instrument, targeting a population of students (who attended the new SCFA during the study period), sampling the population, and determining a mean satisfaction score for each student based on the data collected with the survey instrument. Subsequently, the average of the students' mean scores became the mean satisfaction score and the measure of the internal benchmark. The mean satisfaction score became the dependent variable for the purpose of conducting statistical analyses. Demographic data permitted the identification of mean satisfaction scores between regions of South Carolina, type of fire department represented by the students, and by number of classes attended by students during the study period.

Data Collection and Analysis

The South Carolina Fire Academy provided a list of 3,482 students who had attended the Academy during the study period. The student list was reviewed to prohibit any student from having a higher probability of being selected. A random number table was used to select students according to social security number. Once a student was selected, the name was removed from the list so that every student had an equal chance of being selected. One hundred and fifty randomly selected students were chosen to participate in the study.

The *South Carolina Fire Academy Customer Satisfaction Survey*, a cover letter, and self-addressed return envelope were mailed to the 150 randomly selected students. A follow-up letter was sent three weeks later to students who had not returned their completed survey. Lastly, a third request for response along with a new copy of the survey and self-addressed stamped envelope was mailed to individuals who had not responded after six weeks.

The data in Table I shows the total population distribution for the seven Regional Training Centers and those students from out-of-state who attended the new South Carolina Fire Academy during the timeframe of the study. Sixty (40%) usable surveys were received by the conclusion of the third mailing. Also included in Table I are the results of the random sampling and the returns from each region that comprised the data analyzed to determine the internal benchmark of customer satisfaction.

Table I
Population, Sample, and Returns

Regions	1	2	3	4	5	6	7	Out-of-State	Total
Population	651	216	202	413	1,098	618	232	52	3,482
Sample	23	16	14	22	32	27	12	4	150
Returns	7	10	6	5	10	13	4	3	58*

* Two additional usable surveys were returned that did not identify a region.

Reliability and Validity of the Survey Instrument

The South Carolina Fire Academy Customer Satisfaction Survey was reviewed during its development by a panel of experts using a Delphi technique to ensure content validity. Additionally, a group of randomly selected South Carolina Fire Academy students pilot-tested the instrument. Post hoc analysis revealed that the questionnaire appeared to have criterion-related validity when compared to post-course evaluations collected and analyzed by the South Carolina Fire Academy staff independent of this study. The following procedures were implemented in order to establish baseline information related to the overall reliability and validity of this instrument.

Follow-up telephone interviews with five randomly selected individuals, not returning the survey, revealed no bias for or against the Academy as a reason for not completing and returning the instrument. This suggests that a systematic sampling error was not prevalent.

A t-test was used to determine if there was a significant response difference between the first one-third (20) of the questionnaires returned and the last one-third of the returned questionnaires. At the .05 level of significance, there was no significant difference between the earliest and latest returns on any of the 31 questionnaire items used to determine the mean satisfaction score for the internal benchmark of student satisfaction.

Three different methods were utilized to determine the reliability of the instrument. After all returns had been accepted, ten respondents were randomly selected to receive a duplicate South Carolina Fire Academy Customer Satisfaction Survey for a test-retest reliability comparison. Appropriate documentation was included to explain that they had been selected as a test group for determining the reliability of the instrument. They were asked to remove themselves from the procedure if they had attended the new South Carolina Fire Academy after the timeframe of the study. Eight of the ten re-tests were returned. Utilizing a Pearson Product-Moment Correlation, the test-retest reliability was .955.

In addition to the test-retest reliability analysis, a Cronbach Alpha test was performed to determine the internal consistency of the instrument. A Cronbach Alpha of .906 was computed for the South Carolina Fire Academy Customer Satisfaction Survey.

The third reliability check was completed to verify that the data received on the survey were correctly entered into the computer for analysis. To confirm that data were entered correctly, 20% of the qualified returns were randomly selected. The audit indicated an estimated error rate of .079%.

Results and Findings

The mean satisfaction score was calculated by determining the average of the 31 questionnaire items answered by each respondent. Students in the sample population were instructed to respond to each item by placing an "X" on a 15 centimeter graphic scale similar to that shown in Figure I.

Figure 1. Graphic scale Used to Collect Quantitative Data on Survey Instrument

AGREE ____ DISAGREE

According to Kubiszyn and Borich (1993), the graphic scale method permitted a common frame of reference for comparing all respondents on the same items and to compare item by item. The marks on each of the scales for each item were measured using a metric ruler, and the resulting 0 to 15 scores provided a continuous score for each item.

The mean score for each of the 60 qualified respondents was then summed and divided by 60 in order to determine the overall mean satisfaction score (13.52 ± .55). The mean and median satisfaction scores, standard deviation, and minimum and maximum scores obtained from the South Carolina Fire Academy Customer Satisfaction Survey are included in Table II.

Table II
Mean Satisfaction Score Descriptive Statistics

Cases	Mean	Median	Std. Dev.	Min.	Max.
60	13.52	14.75	2.15	5.25	15.00

A one-tailed t-test with the test value of 13 was conducted at the significance level of .05. The results are included as Table III.

Table III
Customer Satisfaction Benchmark T-Test for Significance Test Value = 13

Number of Cases	Mean	Std. Dev.	SE of Mean	Mean Difference
60	13.52	2.15	.28	.52

t-value=1.86, df=59, one-tail significance=.03

The one-tailed p-value of .03 is less than the one-tailed probability of .05. Therefore, there was sufficient evidence at the .05 level of significance to reject the null hypothesis that the mean satisfaction score was equal to or less than the benchmark score of 13. The alternative hypothesis was accepted with the conclusion that the mean satisfaction score was greater than 13. It was then concluded that the South Carolina Fire Academy exceeded its benchmark target of 13 on a scale of 0 to 15.

With regard to subsidiary question #1, the importance of the question was to determine whether the delivery of SCFA programs was perceived by students as being equal throughout South Carolina. The descriptive statistics for the seven different regions are presented in Table IV.

Table IV
Mean Satisfaction Score by Region Descriptive Statistics (N=55)

Region	Return	Mean	Median	Std. Dev.	Min.	Max.
Region 1	7	13.54	13.50	1.62	11.25	15.00
Region 2	10	13.78	14.38	1.71	9.75	15.00
Region 3	6	11.17	11.25	3.56	5.25	15.00
Region 4	5	11.70	12.00	2.51	8.00	15.00
Region 5	10	14.13	14.50	1.07	12.25	15.00
Region 6	13	13.79	15.00	2.26	7.50	15.00
Region 7	4	14.81	15.00	0.38	14.25	15.00

An analysis of variance was used with the mean satisfaction scores for the seven regions as the dependent variable and the seven regions as the independent variable. As indicated in Table V, student satisfaction scores were significantly different (p=.04) between regions.

Table V
Mean Satisfaction Score by Region – Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	6	61.10	10.18	2.41	.04
Within Groups	48	202.43	4.22		
Total	54	263.53			

To determine which region was significantly different, a Fisher's Least Significant Difference Test was performed (examining all paired comparisons of means) at a significance level of .05. The Fisher's Test indicated that Region 3 was significantly different from Regions 1, 2, 5, 6, and 7 and that Region 4 was significantly different from Regions 5 and 7. Further data analysis revealed that the single most significant factor that distinguished Regions 3 and 4 from the other regions was the lack of student notification at least 24 hours prior to a course being cancelled.

The second subsidiary question investigated the consistency of training administration, curriculum, and instructors throughout the statewide delivery system of the South Carolina Fire Academy. During the development phase of the survey instrument, a panel of experts categorized the 31 questionnaire items into groups that best described the nominal variables of training administration, curriculum, and instructors. The descriptive statistics for these variables are reported in Table VI. After the students' responses were ranked from lowest to highest, the Friedman 2-way ANOVA non-parametric test was performed to determine whether there was a statistically significant difference between the variables. There was significant evidence (p = .0008) at the .05 level of significance to conclude there was a difference between the three variables based on how individual students ranked the variables.

Table VI
Mean Satisfaction Score by Administration, Curriculum, and Instructors as Variables – Descriptive Statistics

Variable	Returns	Mean	Median	Std. Dev.	Min.	Max.
Administration	60	12.97	13.50	2.25	6.07	15.0
Curriculum	60	12.62	13.25	2.56	6.17	15.0
Instructors	60	14.02	14.60	1.34	9.18	15.0

To determine which of the variables were statistically different from the others, a Wilcoxon Matched-Pairs Signed-Ranks test was performed. Based on these results, there was sufficient evidence at the .05 level of significance to conclude that the variable, which described instructors, was ranked significantly higher than the administration and curriculum variables.

The results imply that competent instructors are vital to the success of the South Carolina Fire Academy. Competent instructors can deliver high-quality training even when curricula are less than satisfactory and meet the needs of students who may not be satisfied with assistance from the SCFA administration.

The third subsidiary question focused on whether or not satisfaction scores for the public fire departments (career, volunteer, and combination) were perceived as being different from that of the private industrial fire brigade training. An analysis of variance was performed with the mean satisfaction score used as the dependent variable and the type of fire department used as the independent variable with results indicated in Table VII.

Table VII
Mean Satisfaction Score by Type of Fire Department – Descriptive Statistics

Variable	Returns*	Mean	Median	Std. Dev.	Min.	Max
Paid Fire Department	10	13.65	15.00	2.33	8.00	15.00
Volunteer Fire Department	20	13.83	14.38	1.46	9.75	15.00
Combination Fire Dept	20	13.62	14.63	2.57	5.25	15.00
Industrial Fire Brigade	6	12.92	14.63	3.13	7.50	15.00

*Four students were not members of a fire department and were not included in the reported returns.

The analysis of variance indicated that there was not a significant difference ($p=.75$, $\alpha=.05$) between the mean satisfaction scores based on the type of fire department. Lower satisfaction scores for industrial firefighters may be linked to their broader exposure to other professional organizations.

The fourth subsidiary question investigated the consistency of the training experience over multiple training exposures. A new student may be impressed with new facilities and/or curriculum with the halo effect being present during an assessment. More frequent training may result in lower satisfaction after the facility and/or curriculum have become routine.

Table VIII includes the arrangement of the number of classes attended into four discrete categories and the descriptive statistics for each. To perform this test an analysis of variance was performed with the mean satisfaction score used as the dependent variable and the number of classes attended used as the independent variable.

Table VIII
Mean Satisfaction Score by Number of Courses Attended – Descriptive Statistics

Courses Attended	Returns	Mean	Median	Std. Dev.	Min.	Max
1-2	42	13.62	15.00	2.09	7.50	15.00
3-4	13	13.14	13.14	2.65	5.25	15.00
5-6	4	13.31	13.00	1.33	12.25	15.00
7	1	15.00				

The analysis of variance revealed that the number of classes attended did not make a difference ($p=.81$, $\alpha=.05$) in how students perceived the quality of their training experience at the new South Carolina Fire Academy.

Although there was no statistical difference in student satisfaction scores by number of courses attended, the data indicated a low negative correlation between these variables (-.02). Therefore based on this data, a slight potential exists for students to become less satisfied the more they attend training at the South Carolina Fire Academy.

Conclusions and Recommendations

This benchmarking study concluded that the new South Carolina Fire Academy exceeded the established internal student satisfaction benchmark target of 13 out of a possible 15 as determined by the 1996 South Carolina Fire Academy Customer Satisfaction Survey. The mean satisfaction score (13.52 ± .55) based on a random sample of students who attended the Academy during its first five months of operation supports this conclusion. The fact that the new South Carolina Fire Academy exceeded its internal benchmark in this assessment should be a motivating factor for Academy employees and a promotional asset for recruiting future students. However, the range of responses (5.25 to 15.00) does create the awareness of issues related to administration, curriculum, and instructors that affect student satisfaction. Subsequently, the Academy has implemented a strategy of continuous quality checks based on student feedback and internal management controls.

The Academy has also implemented programs to obtain consistency between its seven Regional Training Centers. The significant difference in satisfaction between Regions 3 and 4 and the remaining five regions was reviewed to determine the different business and training practices that contributed to student satisfaction and dissatisfaction.

The staff of the new South Carolina Fire Academy continues to be cognizant of its interactive environment with other training agencies, especially in the context of training industrial firefighters. The growth of industrial training is essential to the financial business plan of the new SCFA. Therefore, the South Carolina Fire Academy has expanded its research of best training processes and is continually seeking to implement those improvements where possible.

The South Carolina Fire Academy, through its professional development training for full-time and part-time instructors, reinforces the importance of monitoring student satisfaction. Quality awareness is also communicated to students as they attend Academy training by encouraging students to report problems as soon as possible so that the training experience is not impeded by an unsatisfactory, but correctable, circumstance.

Contribution of Knowledge in HRD

This study, involving the assessment of students who attended the new South Carolina Fire Academy during its first five months of operation, established the baseline of student satisfaction against which future comparisons can be made. The practice of benchmarking requires a continuous process of evaluation to determine the trend of the criteria being evaluated. Now that an internal benchmark of customer satisfaction has been established, longitudinal studies can be conducted on a regular basis to monitor adherence to this benchmark standard.

The use of the *South Carolina Fire Academy Customer Satisfaction Survey*, or similar instrumentation, should be expanded to other statewide fire service training facilities. If other training academies are willing to participate in such an assessment, a standardized comparison of fire service training would be possible.

With the commitment to quality by the South Carolina Fire Academy and the support from the fire service in the State, the Academy's goal of becoming a "Center of Excellence" for fire service training will stay in sharp focus.

The process of determining customer satisfaction is transient to other organizations. All organizations that provide training services to their internal and external customers must be concerned about quality and the perceived-level of customer satisfaction if they are to survive in the 21st century.

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Implementing a New Model For On-the-Job Training: Critical Success Factors

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Post Offices Inc. in the Netherlands has developed and implemented a new instruction model for the training of desk employees. The quality of the new instruction model was assessed by means of the evaluation model of Jacobs & Jones for on-the–job training. It is concluded that the implementation of the training model has not been completely successful. It is concluded that the attitude of the mentors as well as the content of the self study material have to be improved. Besides, the duration of the course has to be prolonged.

Key Words: On-the-Job Training, Transfer of Training, Training Development

Post Offices Inc. in the Netherlands has been training new employees for more than 25 years. Increased demands for quality and a need for more uniform services have led the Human Resources department of Post Offices Inc. to develop and implement a new instruction model for the training of desk employees in small, privately-owned post offices. It was decided to use (structured) on-the-job training (OJT) because of the many advantages that it offers and the appropriateness of the method in this specific case.

OJT has well-known advantages, such as: (1) a strong link between training and practice, which has a positive impact on trainees' motivation; (2) skills acquired on the job are learned more effectively (faster and with high retention levels); (3) favorable cost-effectiveness; (4) flexibility - OJT is very flexible, can be delivered just in time, and can be easily adapted to changes; (5) the transfer problem is minimized, since training is given on the site where the employee will work.

OJT was thought an appropriate method in this special case because Post Offices Inc. achieved a "positive score" on the selection criteria mentioned by Jacobs & Jones (1995). These criteria include: the nature of the task (training is necessary immediately and involves new employees, the tasks to be learned are not very difficult, and the consequences of errors can be minimized); available resources (mentors, equipment, tools and data are available); constraints in job setting (available training locations, low work distraction); financial considerations (large number of trainees); and individual differences (trainee prerequisites and preferences are both unknown).

Nevertheless, there are also considered to be a number of disadvantages to OJT: (1) supervisors/line managers often perceive OJT as an extra burden; (2) the atmosphere on the work site may not be favorable to starting up the learning process and keeping it going; (3) a heavy pressure of work can impact negatively on the training process; (4) learning materials are often not kept up to date; (5) because of time constraints, little attention is paid to the necessary background of the skills and knowledge to be learned; (6) OJT preparation of the trainers who will have to deliver OJT is mostly inadequate.

Post Offices Inc. decided to evaluate the new instruction model twelve months after its implementation. The study focused on the following research question: Is the quality of the instruction model considered to be satisfactory in terms of instructional materials, learning results, and the practical behavior of employees?

Theoretical background

Jacobs & Jones (1995) and Rothwell & Kazanas (1994) state that workplace training can be divided into structured, planned on-the-job training, usually referred to as OJT, and unstructured, unplanned on-the-job training. Structured on-the-job training is planned instruction occurring on the job during work, centered on the knowledge and skills workers should possess in order to perform competently (Rothwell & Kazanas, 1994). Structured OJT can be

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defined as an organized, structured, intentional form of training that contains well-directed pedagogical interventions, in which the work site functions as a place for learning (De Jong, 1998). An additional characteristic of OJT, according to Van der Klink (1998), is that on-the-job training involves intentional learning and that, as a consequence, a (formal) training arrangement is required that includes the intended training objectives. Structured OJT may be delivered by a supervisor, an experienced co-worker, a subordinate, or a job coach from outside the organization, or it may be self-directed and thus overseen by the employees themselves. It usually involves one-on-one instruction. In developing structured OJT there is often first an extensive job analysis, followed by a step-by-step instruction method. Unstructured, unplanned OJT also occurs at the work site. This involves informal methods of learning (non-intentional learning, learning as a by-product of the daily scheduled tasks). A plan or training arrangement is non-existent and employees learn by, for instance, imitating experienced workers.

One interesting new phenomenon is the introduction of concepts such as the "learning organization", "lifelong learning", and "organizational learning". These concepts are based on the idea that organizations cannot build on the individual learning of their employees, but that this learning needs to be shared and acted upon in such a way that the organization performs outstandingly in an increasingly competitive environment (Senge, 1990). Organizations should operate a continuous, organizational learning cycle (Nonaka, 1991), where knowledge is created, captured, shared and implemented, preferably by teams of workers. In learning organizations the role of HRD professional is changing from training specialist to performance improver (Robinson & Robinson, 1998), focusing on the creation of opportunities, learning environments, in which individuals and teams can learn and share each other's knowledge. These developments shed a different light on on-the-job training. On-the-job training should be read as on-the-job learning, which means that the HRD professional has to create situations in the workplace in which employees are invited and encouraged to learn (together). It should also be emphasized that the HRD professional has to take into account a shift in learning content: besides instrumental, job-specific knowledge and skills, growing importance is being attached to self- regulating and team-regulating competencies (meta-cognitive competencies: e.g. planning, monitoring, and assessment activities; socio-communicative and socio-normative skills).

Underlying reasons prompting the study

A number of reasons were observed that all pointed to the necessity for implementing a new instructional model. In practice, the variation relating to the execution of the training program for desk employees could be considered large. Many assessments pointed out that the length of the training program and the application of the training materials and tests depended very much on the local circumstances of the post offices and the preferences of the mentors. Besides, mentors had often not been trained for this work and were doing it part-time. The introduction of the training model was meant to achieve a minimum level of quality. For these reasons it was decided to use full-time mentors, starting from the introduction of the new training model.

The new training model has the characteristics of structured OJT. The model is based on extensive job analysis, the learning process is planned, the amount of available training time is restricted, and the results are measured (see figure1).

Fig 1: The four characteristics of the new instruction model

1. The length of the training is 4 weeks.
2. The training consists of a practical and a theoretical part. The practical part comprises learning on the job by selling the "products" of Post Offices Inc. to clients at the counter (4 hours a day) under the supervision of a mentor. The theoretical part consists of learning the theory by self-study (4 hours a day), with the mentor being at the new employee's disposal.
3. The instruction material for self-study is provided by the HRD department of Post Offices Inc. Two books and a COO-package have to be used during self-study.
4. To measure the progress of new employees, they must be tested to assess their behavior and knowledge of services.

Evaluation of the training program

Kirkpatrick (1979, 1994) developed a model to evaluate training efforts. He identified four levels of evaluation and arranged them hierarchically from the least to the most difficult. The lowest and easiest level concerns evaluation in terms of learner reactions: did the learner like the training? The second level of evaluation is learning: what was learned from the training? The third level is behavior: how much did learners change their behavior as a result of the training? The last and fourth level is results: how much organizational improvement resulted from the learner's behavioral change?

This model has been criticized by several authors. Holton (1996) argues that Kirkpatrick's model is unjustly acknowledged by many HRD professionals as the standard in the field. The model is not based on profound empirical evidence and is considered to be incomplete. Several authors suggest adding an additional level to measure more specifically return on investment (see Phillips, 1995). At best, the model could be labeled as an (incomplete) taxonomy, that is to say, a framework not including "...all constructs and variables underlying the phenomena of interest, thus making validation impossible" (Holton, 1996, 6). This also suggests that the implied "causal relations" between the levels of Kirkpatrick's model are not based on empirical evidence, so, to be clear, are "unmistakably non-existent".

This does not mean, however, that the model is completely unfit for our purpose. Elements of Kirkpatrick's model were included in the evaluation model that Jacobs & Jones (1995) developed to measure the results of structured OJT. Jacobs & Jones' model has all the characteristics of a systems model, and consists of four components: training outputs, training processes, training inputs and organizational context. The training output questions relate to whether the training objectives were met. (e.g. Were the training objectives achieved? What were the effects on job and organizational performance? Were training outcomes consistent with the trainee's development needs?). The training process questions focus on the behaviors of the mentor and the trainee during the training (e.g. Did the mentor use the model as intended? Did the mentor use effective communication skills? Did the trainee attend to the mentor?). The training input questions focus on the system components present at the time of training: learning tasks, training design and training module, training location, and trainee. Questions relating to this are: Was the training module accurate and complete and appropriately formatted? Did the trainee have the prerequisites needed for training? The organizational questions address the support for the trainee within the context, such as the role of supervisors and colleagues, constraints caused by production process pressures, time constraints, and the quality of the tutor's training (employees in the role of mentor). The questions included the following: Did management provide sufficient resources to support OJT? Can OJT occur within the constraints of the production or service delivery schedule?

Methodology

This section describes the methodology of the study. The following topics come up for discussion consecutively: the research questions, the subjects and settings, and the data collection procedure.

Research questions

The overall research question (Can the quality of the new instruction model be considered to be satisfactory?) was divided into sub-questions. These sub-questions were clustered according to the four components of the evaluation model of Jacobs & Jones (1995): training outputs, training processes, training inputs and organizational context.

Training outputs

- Did the trainee's behavior in dealing with clients at the desk meet expectations?
- Did the knowledge achieved by the trainees reach a predetermined level?

Training processes

- Did the mentor implement the new instruction model completely, as intended by the designers?
- Did the mentor apply all four characteristics of the new instruction model, such as a training duration of four weeks, 4 hours' on-the-job training, alternated with 4 hours' self-study, application of the instructional materials provided by the HRD department, testing the learning results of the trainees four times in the program?

Training inputs

- Were the trainees' entrance level and prerequisites, the mentor's method of instruction, and the complexity of the training material taken into account during the development of the new instruction model?
- Was the quality of the training materials (the textbooks, the COO-package, the learning guide) judged satisfactory?
- Did the different participants/stakeholders have a positive attitude towards the new instruction model?
- Did the beliefs and the behavior of the mentor correspond with the vision defined by the HRD department?

Organizational context

- Did the management of Post Offices Inc. provide the necessary resources to support the implementation of the new instruction model?
- Was there a conflict between being a productive trainee (selling products at the counter) and, at the same time, being expected to learn new behavior through OJT?
- Did the mentor have enough time available to train the trainees?

Subjects and settings

Two studies were in fact carried out: a small-scale survey and a case study. The following groups of persons participated in the survey: instructional designers (N=2), mentors (N=33), regional managers (N=7), employers (in this study: self-employed shopkeepers) (N=3) and trainees (N=18). In addition to the survey, case studies were carried out in four situations to obtain a deeper insight into the training process and the factors influencing it. In the case studies the number of participants were: mentors (N=4), trainees (N=5), employers (N=3), regional managers (N=7) and training designers (N=2).

Data collection procedure

Data collection took place by means of a survey of all participating post offices and four selected case studies. Figure 2 mentions all the sources and instruments used.

Although the collected data were processed quantitatively per question/item in each instrument, in this paper the results are discussed qualitatively at an aggregated level: all collected data (per research question) are taken together, which implies that all the available source material contributed to the composition of the answers.

Figure 2: Instruments for data collection and data sources used to answer the research questions

Mentors

Data from mentors were collected by means of a questionnaire and, if they were participating in the case studies as well, a semi-structured interview and a log.

Employers

Employers were asked to fill out the standard evaluation form of the HRD department of Post Offices Inc. and, if they were also participating in the case study, an interview was held.

Regional managers

Regional managers filled out the standard evaluation form and, if also involved in the case studies, a semi-structured interview was held.

Designers

Designers were questioned by means of a semi-structured interview.

Trainees

Finally, the trainees filled out a questionnaire and the standard evaluation form, and had to pass four written tests (one each week of the training program).

Results

In this section the results are discussed in the order in which they were used by Jacobs & Jones (1995).

Training outputs

- Did the trainee's behavior in dealing with clients at the desk meet expectations?
  The employers who were involved in the case study were on the whole satisfied with the way the trainees performed their tasks at the desk. Since the WAVE-test - an observation set used by the mentors to assess the trainee's behavior in dealing with clients at the desk - was applied by only 15 of the 30 mentors, the findings are, to a certain extent, subjective.
- Did the knowledge of the new employees reach a predetermined level?

The trainees were tested at the end of each week of the training program. Two tests were administered, on different subject matter: the mail traffic test and the post bank test. The scores were expressed in percentages. The assumption was that the trainees' score would increase as the training program progressed. At the end of week 1 a score of 35% was expected, at the end of week 2, a score of 50%, at the end of week 3, a score of 65%, and at the end of week 4, a score of 80%. Data were collected from 10 mentors. Nine mentors stated that the score of 80 % had not been reached at the end of the program. They explained that the overall criterion was too high and the subject matter too broad. These results were confirmed when the trainees' test results were compared (collected at different moments: see test 1 etc. in table 1). It appeared that the criteria for test 1 and test 2 - 35% and 50% respectively - were too low and the criterion for the last test (test 4) was too high. Trainees scored on average 59%, respectively 55% in test 1, 64% and 60% in test 2, 67% and 68% in test 3 and, finally, 72% and 74% in test 4.

Table 1: Results of the theory tests taken by the new employees

N=39	Mean	SD
Mail traffic		
test 1	59	11
test 2	64	9
rest 3	67	7
test 4	72	10
Postbank		
test 1	55	7
test 2	60	7
rest 3	68	11
test 4	74	9

Training processes

- Did the mentor fully implement the new instruction model, as intended by the designers?
- Did the mentor apply all the four characteristics of the new instruction model in the program, such as a training duration of four weeks, 4 hours' on-the-job training, alternated with 4 hours' self-study, application of the instructional materials provided by the HRD department, testing the learning results of the trainees four times?

The length of the training program was considered the minimum to achieve the training objectives. Since it is considered to be very difficult to start work as a trainee in a post office that has been set up very recently or - even worse - that is being set up at the time of the trainee's arrival, many mentors send trainees for their first, and sometimes second, week to a post office that is operating well. It should be understood that this problem occurs frequently as a consequence of the implementation of a new policy of Post Offices Inc. to close their own post offices and set up new, small post offices in existing, privately-owned (book) stores.

A considerable number of mentors were of the opinion that the written self-study material and, to a lesser extent, the COO-package was too extensive; this resulted in not all the material being studied by the trainees. Only 20 mentors used the week planning and the checklist of activities from the mentors' guide; only 12 administered the learning (theory) tests, due to a lack of time. The WAVE-test - an observation set the mentor used to judge the trainee's behavior in dealing with clients at the desk - was used by only 15 of the 33 mentors, because the mentors did not value it. (Some think that this practical test cannot be scored objectively, while others are of the opinion that the practical test should be administered after the trainees have learned the necessary (prerequisite) knowledge.)

The designers took into account the trainees' level and their prerequisites. The mentors were selected after the training program had been developed, which meant that they did not participate in the design and development process. This was considered to be a handicap, because the mentors were not always aware of the paradigm that is basic to the training program. The designers tried to reduce the complexity of the program content by using the modularization principle and by applying clear sequencing principles. The training program seemed to have been prepared for "normal" post offices, and not to have taken into account the specific situation in the new, privately-owned post offices.

Training inputs

- Were the entrance level and prerequisites of the trainees, the mentor's method of instruction, and the complexity of the training material taken into account during the development of the new instruction model?

  It became clear from the interviews with the designers of the training program that the (educational) entrance level of the trainees had not been taken into account during the development process. There had also been no communication with the trainees during the development process. Trainees were only expected to give feedback on an evaluation sheet at the end of the training program.

The mentors were recruited after the development of the new instruction model and were told how to instruct. This meant that the mentors did not have the opportunity to deliver input to the designers. From an innovative perspective, this was not very sensible.

- Was the quality of the training materials (the textbooks, the COO-package, the learning guide) judged satisfactory?

  Eighteen of the mentors stated that the theoretical part of the training program did not prepare the trainees adequately for their work at the desk. Too much information was presented. Essential information only should be presented briefly so that everything can be worked through in the time available. The mentors would like to add job aids; the district managers were of the same opinion.

  The mentors judged all the 41 modules of the training program. They rated which modules were most important for job performance, which were very difficult, which very motivating, which too extensive and, finally, which took more or less time than expected. Nineteen mentors did not apply the sequence of 41 modules, as recommended in the program, because this did not link up with the trainees' practical work as expressed in activities at the desk. Only eight of the mentors approved the recommended sequence of modules.
- Did the different participants/stakeholders have a positive attitude towards the new instruction model?

  The mentors, the district managers and the developers of the instruction material criticized the training program on the same points: there was not enough time available and there was too much subject matter. Nevertheless, all respondents commented positively on the daily alternation between theory and practice, which was based on the central paradigm underlying the new training program.
- Did the beliefs and the behavior of the mentor correspond with the vision defined by the HRD department?

  Mentors "play" four roles: the mentor as mirror, instructor, supporter, or confidential agent. Most (28) mentors saw themselves as an instructor. In second place, 25 mentors saw themselves as a supporter; the role of confidential agent was mentioned by 22 mentors, and that of mirror by 21 mentors.

Organizational context

- Did the management of Post Offices Inc. provide the necessary resources to support the implementation of the new instruction model?

  One of these resources is an adequately trained mentor. The mentors mentioned that the training content was not difficult for them to teach, although a few mentioned that the pressure of work was too heavy. A quiet place to study the self-study books is another important condition, frequently missing. The mentors indicated that 27 post offices did not have such a quiet place to study. The mentors' solution was to let the trainees take their self-study books home.
- Was there a conflict between being a productive trainee (selling products at the counter) and, at the same time, being expected to learn new behavior through OJT?

  The training program was designed so that clients would be inconvenienced as little as possible. The mentors indicated that clients were aware of the fact that training was going on, but that they reacted very positively and patiently; only a few clients complained that they had to wait too long.
- Did the mentor have enough time available to train the trainees?

  The mentors and the district managers indicated that the duration of the whole course was too short and should be extended to 6 weeks.

Conclusion and discussion

This study shows some of the typical difficulties attached to putting OJT into practice. The overall conclusion is that the implementation of the model did not meet all expectations. Taking the data into account, it is reasonable to assume that successful implementation of OJT lies in the variety of the products and services of the particular post office (a large post office has a broader range of products and services than a small one). The new, small private post offices offer, in theory, the same products and services as the large ones that are employed by Post Offices Inc., but, in practice, they offer only a limited number of services. The training model assumes that all services have to be learned during self-study. However, it is likely that mentors advise trainees to study only those modules that cover the services of their own private post office. OJT is only effective if what is learned can be put into practice, and this might explain the findings regarding the trainees' scores on the learning tests.

A second factor influencing successful implementation concerns the mentors' performance. Mentors are expected to serve as a behavioral model, to provide feedback, arrange an adequate environment for self-study, motivate trainees for self-study and evaluate trainees' progress on a regular basis. When mentors are not fully convinced of the quality of the new instructional model, the implementation will not be successful. The following provide some explanation of the fact that the mentors did not work according to the guidelines of the new instructional model.

First of all, the recruitment of mentors and the development of the new instructional model were two different projects. Although all the mentors were recruited from a group of experienced desk clerks within Post Offices Inc, their experience was not included during the design of the new instructional model. There was thus no opportunity to use the feedback of highly skilled desk clerks in the development of the model.

A second explanation might be that there was only a short, two-day training program scheduled for the mentors. There was not enough time to explain the theoretical background of the model, to convince mentors of its quality, to discuss the application of the model in practice, or to teach mentors how to cope with problems (such as the lack of sufficient time for trainees' self study). The preparation of the mentors for their mentoring activities was insufficient.

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A Comparative Profile of Workgroup Climate in Different Organizational Settings

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Research has shown that work climate plays a central role in the effective functioning of a group or team. The following study provides a comparative analysis of climate data collected on over 5,000 groups (representing over 23,000 team members) during a 9 year period from 10 different databases. Findings revealed significant effects with respect to rater (manager vs. group member) and industry. Implications for understanding climate and its impact in various organizational settings are discussed.

Keywords: Climate, Managerial Behavior, Workgroups

With the rising popularity of teams, task forces, and cross functional groups as a method for defining jobs and processes in organizations today, it is perhaps no surprise that issues associated with the creation and maintenance of high performing workgroups is also of significant concern for HRD, OD and I/O practitioners and researchers (e.g., Church, 1996; Cohen, 1993; Guzzo, Salas & Associates, 1995; Katzenbach & Smith, 1993; Manz & Sims, 1995; Wellins, Byham, & Wilson, 1991). Teams and groups have become an integral part of many organizational initiatives from reengineering to total quality management to organizational learning efforts (e.g., Hammer & Champy, 1993; Sexton, 1994; Nirenberg, 1993) and, as such, represent what many consider to be the primary means for achieving success. Moreover, given the increasing level of complexity of work and the interdependencies inherent in a global economy, many authors (e.g., Galbraith, Lawler, & Associates, 1993; Howard, 1995; Katzenbach & Smith, 1993) predict that working with others in groups will play an even more important and significant role in the future of organizational life. Even the term "virtual team" has entered the vernacular and soon may be an area in need of an OD or HRD related specialization. Clearly, the notion of the independent worker acting alone within a small sphere of influence is a thing of the past.

In general there are a number of important factors that contribute to successful team related efforts. At the broadest level, team basics include a need for accountability, appropriate levels of work and interpersonal skills, and commitment and shared purpose on the part of individual members (Katzenbach & Smith, 1993). Although these elements all represent different aspects of team functioning and can be difficult to assess, one construct that provides a good degree of overlap with these basics is the nature of the day-to-day climate as experienced by members in the workgroup. Defined by Burke and Litwin (1992) as "the collective current impressions, expectations, and feelings that members of local work units have that, in turn, affect their relations with their boss, with one another, and with other units" (p. 532), perceptions of climate have been linked in prior studies to employee satisfaction, effective management practices, transformational leadership styles, team spirit, and workgroup performance (Church, 1995; Daniel, 1985; Friedlander & Margulies, 1969; Litwin, Humphrey, & Wilson, 1978; Litwin & Stringer, 1968; Schneider, 1980; Van Eron & Burke, 1992). In many ways, the state of a workgroup or team climate is a strong indicator of its current performance and even future potential. Aside from the obvious linkages with team functioning, however, prior research and theory (Litwin et al., 1978; Van Eron & Burke, 1992) have indicated that the notion of climate is in fact multifaceted and can be best represented by six interdependent aspects or dimensions. Although the names often differ, in general these six dimensions include clarity, recognition, standards, participation, intragroup relations, and intergroup relations. Each of these are described briefly below.

The first aspect of climate is *clarity*. The issues here include whether or not team members are clear about and understand their own and others' roles and responsibilities, and the way in which work has been organized. Operating procedures and goals are also of concern. Clearly, if individuals do not know what they are supposed to do and how it fits into the overall group objective, the team cannot be very effective.

Recognition focuses on the extent to which group members appreciate, acknowledge and provide recognition to each other about their contributions. While many people concern themselves with how often management formally and informally rewards direct reports, the recognition aspect of climate really reflects the member-to-member perspective. In general, the more individuals directly express their appreciation for each other the greater the commitment to the team outcome.

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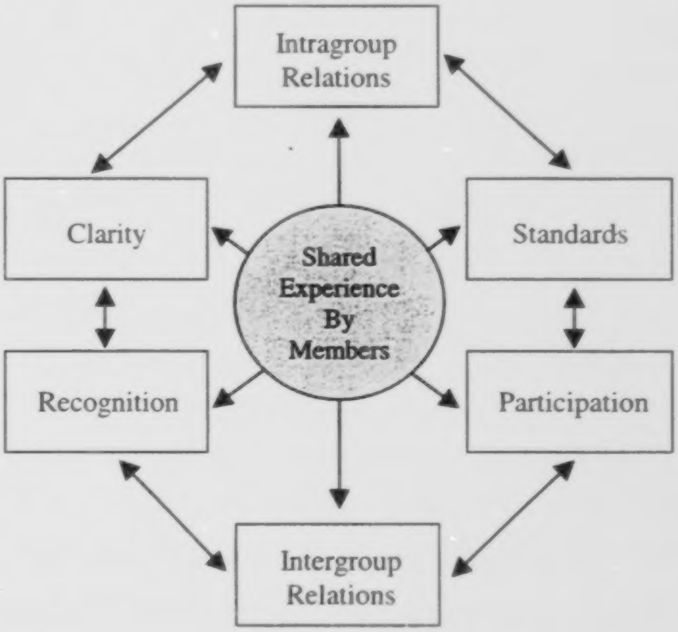
Even if people are comfortable patting each other on the back, if the *standards* of the group are too low, unchallenging, or uninspiring individuals are not likely to perform to the best of their abilities which, in turn, will also affect group performance. Aside from its direct link to performance, the notion of standards is equally important for enhancing team member motivation, commitment and developmental opportunities as well.

Participation is also related to the process of motivating and involving team members and building commitment to the group effort. The more individuals can influence the group goals and direction, and the more members solicit ideas and opinions from each other, the stronger the climate and the solidarity of the group in general.

As might be expected, *intragroup* relations at the top of the figure represents the sum of how individual team members interact with each other. Clear indicators here are such things as members demonstrating trust for one another, the existence of friendly and helpful interpersonal relationships, and the extent to which individuals stick up for other team members in times of need.

The final aspect of an effective climate is the nature of the *intergroup* relations. These represent how group members interact and resolve conflicts with those individuals from other groups in an organization (or function). While one might question the relevance of this externally directed component, as anyone who has worked with large scale organizational change efforts knows the impact of between group relations can make or break a entire intervention or improvement initiative. Although some degree of competitiveness can be motivating, too much negative energy between different teams and groups can lead to unintended performance problems and potentially new team smokestacks as well. Clearly, individuals and groups in an organization have to work together toward a common set of goals, and use interdependent processes to be maximally effective. Figure 1 provides a graphic representation of these six dimensions.

Figure 1. Six Dimensions of Climate



Despite some significant research attention, there are some major deficits in the literature on group climate to date. One of the criticisms inherent in climate based research over the years, for example, has been the lack of consistent conceptualizations and related measures of this variable. In part this is due to the typical confusion by many between group climate and organizational culture, which are two totally different constructs (Burke & Litwin, 1992; Reichers & Schneider, 1990). Such inconsistency is also encouraged by the lack of sufficient attention to climate as an important construct in teams. Despite a renewed interest in effective teams and teamwork in a variety of outlets both academic and professional (Church, 1996), for example, relatively few books or papers on teams and groups actually incorporate the notion of climate at all. Although some climate related issues are certainly reflected in such work (e.g., Katzenbach & Smith, 1993), climate as a major construct in and of itself is in fact often entirely ignored. The result of this confusion is that comparisons of climate data and effects across different organizational settings and contexts are somewhat problematic. Moreover, many questions still remain regarding the fundamental nature of this variable, the impact of potential moderators, and the extent to which this variable is even related to its larger brethren organizational culture. Clearly, more research is needed of a large-scale comparative nature that will help us explore the underlying structure of climate, its components, and inter-relationships.

Another important issue in workgroup or team related research is employee empowerment, or as some (e.g., Church & Waclawski, 1996) have termed it, enablement. Enabling workgroups is one of the "ultimate outcomes" to which many change efforts and initiatives are directed (e.g., Bennis & Nanus, 1985; Block, 1987; Kouzes & Posner, 1987; Shaw, 1992; Wellins et al., 1991). Providing employees with the necessary opportunities and support to take greater ownership of both processes and outcomes has been linked to such desirable organizational improvements as increased individual initiative, enhanced performance, and greater enjoyment on the job (e.g., Kouzes & Posner, 1987; Shaw, 1992; Wagner, 1994). Additionally, the concept of empowerment through participation is considered by researchers and practitioners to be one of the fundamental underlying dimensions to many of the more popular organizational change initiatives such as continuous improvement, total quality transformations, and organizational learning (e.g., Schmidt & Finnigan, 1993; Wellins et al., 1991).

While prior studies have examined the impact of managerial behaviors on employee perceptions of enablement (Church & Waclawski, 1996), the link between this important outcome and climate experienced in the group has not been as well explored. Although one might hypothesize given the research relationships cited above that groups with stronger, more positive work climates would have members who also feel more enabled or empowered to act, this relationship has been to be fully explored.

In addition, although important research has been done linking the concept of managerial self-awareness (MSA) --as reflected in self-other ratings similarity in a executive or manager's behavior--to individual performance (e.g., Church, 1997; Church & Waclawski, 1999a; Yammarino & Atwater, 1997), this type of analysis has yet to be applied to non-managerial experiences such as member-on-member perceptions of team climate. Clearly, there is a need to test the impact of perceptual similarity from a manager-team perspective and its impact on feelings enablement or empowerment as well. While one might expect based on prior research that those managers who are more aware of the true conditions in their workgroups would be better able to provide enabling conditions for their employees, this relationship has not been tested empirically.

The purpose of the following study was to examine these research questions by exploring the similarities and differences in the underlying nature of workgroup climate based on data collected from over 5,000 different workgroups or teams across a variety of organizational settings. Large-scale, applied comparative data analyses such as these have the potential to make an important contribution to the fields of HRD, OD and I/O psychology for two reasons. First, given large sample sizes, this type of study allows for the detection of potentially subtle yet important effects inherent in the nature of employee perceptions (in this case concerning workgroup climate) which might otherwise not be identified. Second, and equally importantly, findings from this type of research provide a descriptive benchmark regarding the nature of the phenomenon examined to which other practitioners can compare trends from an organizational assessment process or researchers can compare results from related investigations.

Method

The following study was based on a combined dataset collected between 1990 and 1999 from multiple organizations. More specifically, climate data from 5,051 teams (including 5,051 managers or team leaders and 23,644 workgroup members) from 10 different samples were examined. This equates to an average group or team size of 4.46 individuals (*SD* = 1.34) per focal team manager responding. Since the last sample group represented an open enrollment public program for a prestigious University, the total number of organization represented is no less than 10 are more closely approximating 50. All data was collected using the same 28 item instrument.

Although geographically and functionally mixed given the global nature of many of the organizations included, the demographics for team leaders provide some indication of the types of groups examined (team member data in this regard was not collected for confidentiality purposes). More specifically, the majority of managers were males (84.3%), and over half were from North America. The average age was 43.57 (*SD* = 6.99), and the mean tenure was 13.80 years (*SD* = 8.70). All of the data were collected in conjunction with one of many different multirater feedback-based executive, management or leadership development programs. Table 1 provides an overview of the response sizes by industry group.

Table 1: Industry Description & Sample Size

Sample/Industry Description	Manager Ratings	Team Member Ratings
1. Apparel/Clothing	78	329
2. Consumer Banking	104	385
3. Diversified Products/Holdings	370	1,701
4. Financial Services	94	412
5. High Tech Government Agency	1,942	10,333
6. Insurance Services	78	369
7. Metal/Chemical	105	525
8. Pharmaceuticals	526	2,456
9. Professional Service Firm	690	2,763
10. Public Program for Managers	1,064	4,371
Totals	5,051	23,644

Although the nature and content of the developmental programs varied considerably depending on the organization, the leadership issues being faced, and the level of training delivery methods employed, in all cases the data were collected and used entirely for individual development purposes only—i.e, non-evaluative in nature. Thus, while the settings differed, the instrument, the process by which data were collected and reported and the uses to which it were directed was held relatively constant. In each setting, careful attention was paid to protecting the confidentiality of the climate ratings obtained as well as the validity of the process, consistent with various practitioner recommendations regarding developmental multirater feedback applications (e.g., Bracken, 1994; Church & Waclawski, 1998; Harris, 1994).

Two measures were used in this analysis. First, the primary measure of interest was workgroup climate. A standardized instrument (Burke, 1986) used in prior feedback programs and applied research (e.g., Bernstein & Burke, 1989; Church, 1995; Church & Waclawski, 1997; Litwin & Stringer, 1968; Litwin et al., 1978; Waclawski, 1996), this 28-item measure assessed perceptions of the climate experienced in the focal managers' workgroup on a day-to-day basis along the six major dimensions noted earlier: *clarity*, *recognition*, *participation*, *standards*, *intraunit relations* and *interunit relations*.

Each of the 28 items was rated using two different scales. First, each individual (manager or team member) rated the extent to which he/she felt that the statement was descriptive of day-to-day conditions in the workgroup using an agreement scale (1=no agreement, 2=weak agreement, 3=moderate agreement , 4=strong agreement, 5=very strong agreement). Next, each statement was rated as to the perceived importance of that condition for effective group performance using an extent scale (1=neutral, 2=low importance, 3=moderate importance, 4=high importance, 5=critical importance). These two scales are used to help raters discriminate between the Lewinian notions of the current state (*what is*) and ideal state (*what should be*). In general, the internal reliabilities of the summary scores for the instrument were quite high among the present sample (.89 for managers, .94 for team members). Subscale reliabilities were lower but still acceptable ranging from .63 to .73 for manager ratings, and .74 to .86 for team members.

The second measure employed was a standard 4-item index of the extent to which the manager and his/her team members felt enabled or empowered on a day-to-day basis in their workgroup. Based on four characteristics of empowerment--*development*, *contribution*, *integration* and *satisfaction* as defined in previous research and theory (Bennis & Nanus, 1985; Burke & Coruzzi, 1993)--this measure has been used in several prior studies as an important outcome of managerial behavior and workgroup experience (e.g., Church & Waclawski, 1996). Although based on a smaller sample of individuals (n = 2,151 teams--this measure was not used in all settings), the alpha measure for the enablement scale was quite strong for team members (.83), and acceptable for manager ratings of their own feelings of enablement (.69).

Manager-team member rating congruence (often an operationalization for the construct managerial self-awareness) was computed using two different methods: (a) the collective level of agreement between manager and team members' climate ratings using a standard index of profile similarity *d*, (e.g., Church, 1997; Nunnally, 1978; Tisak & Smith, 1994); and a four-group categorical agreement method (e.g., Church, 1998; Church & Waclawski, 1999b; Yammarino & Atwater, 1997) whereby participants are classified as under-raters, lower performing accurate-raters, higher performing accurate-raters, or over-raters based on a comparison of total scores.

Results and Discussion

Analyses were conducted on these data using total scores for all 28 items and across the six subscales to look for basic ratings trends and themes across moderators. Averaged team member ratings were used for all analyses as this represented a closer approximating to the true nature of the workgroup experience. Table 2 provides an overview of the descriptive statistics and correlations for each of the summary scores, difference scores, and demographics data where available (not all individuals completed all demographic items).

In general, although within source correlations were quite high for the climate and importance ratings as well as enablement perceptions (e.g., ranging from .35 to .64), between source relationships were far weaker and typical of patterns seen in behaviorally-based self-other ratings research (e.g., Church, 1997; Church & Waclawski, 1999a; Harris & Schaubroeck, 1988). In fact, while manager and team member perceptions of climate were significantly moderately correlated with one another ($r = .34$, $p < .001$), importance levels and feelings of enablement yielded much weaker relationships ($r = .19$, $p < .001$), suggesting only approximately 4% shared variance in manager and team membei ratings on the importance of these variables. Thus, while they may be related, it is unlikely that they represent the same underlying construct, which would argue for the inclusion of both notions in descriptive treatments of teams and groups.

Table 2: Descriptive Statistics & Correlations Among Summary Level Variables

		M	SD	1	2	3	4	5	6	7	8	9	10	11
1.	*Mgr Climate Total*	3.75	0.43											
2.	*Mgr Imp. Total*	3.94	0.37	*.46*										
3.	*Mgr Enablement*	3.91	0.54	*.59*	*.35*									
4.	*Team Climate Total*	3.56	0.36	.34	.12	.21								
5.	*Team Imp. Total*	3.82	0.26	.12	.19	.13	*.47*							
6.	*Team Enablement*	3.80	0.45	.18	.08	.19	*.64*	*.35*						
7.	*Climate Profile Agmt.*	0.98	0.25	.08	.03	.05	-.26	-.19	-.18					
8.	*Imp. Profile Agmt.*	0.78	0.22	-.09	-.15	-.05	-.15	-.26	-.13	.42				
9.	*Number of Members*	4.46	1.34	.14	.05	.14	.05	-.05	.07	-.02	-.18			
10.	*Age (Manager)*	43.57	6.99	.19	.05	.10	.07	-.02	.00	.08	-.03	.10		
11.	*Gender (Manager)*	1.16	0.36	-.04	.10	.02	-.02	.04	.02	.03	.02	-.04	-.19	
12.	*Tenure (Manager)*	13.80	8.70	.18	.05	.09	.12	.01	.01	.03	-.07	.18	.55	-.14

N.B.: Given the sample sizes, all correlations above/below $r = .05$ significant at $p < .05$. All correlations above .10 can be considered a meaningful result. Italics are used to denote within-group ratings. Underlines are used to denote between-group ratings.

An examination of potential moderators at the summary score level revealed little in the way of interesting effects. For example, the size of the group (i.e., number of team members providing ratings) and the gender of the focal manager provided little in the way of meaningful relationships. Interestingly, while age and tenure of the focal manager (which were of course highly correlated with each other) were significantly moderately related to managers' own ratings of climate ($r = .19$, $r = .18$, $p < .001$ respectively), no consistent meaningful effects were present for these same variables when examined at the team member level. The only exception here was that team member climate ratings were somewhat more likely to be positive ($r = .12$, $p < .001$) as the tenure of the manager increased.

Given the lack of general effects for demographic variables, which suggests a strong degree of inherent consistency in the data obtained, a more detailed set of analyses were examined by organizational sample. The ANOVA results and follow-up Scheffé post-hoc comparisons revealed a number of interesting findings across the various measures. In general, workgroups in the consumer banking, high-tech government agency and apparel organizations had significantly higher levels of positive climate and enablement than did those teams in professional service firms, diversified products, financial services, and the public program. These effects were most enhanced for the subscales reflecting the degree of *recognition* and *participation* in the workgroup, as well as the quality of *intraunit* and *interunit relations*. A pattern such as this argues against the possibility of generalized rating effects and points more specifically to distinct differences in the climate of the workgroups experienced in these different organizational settings.

Although it is difficult to speculate regarding the relevance of generalized findings for the public program (which represents teams from many different organizations) and the diversified products sample, the differences observed between the other groups were consistent with some of the cultural strengths and weakness of their respective organizations. For example, the professional service firm and the financial services organizations had cultures that were much less people focused and more financially driven, bureaucratic and procedural in nature. In comparison, both the consumer banking and apparel organizations had more informal cultures and were focused on serving front-line customers (and not CEOs and CFOs of major corporations as with the professional and financial services samples). Thus, more positive levels of recognition, participation, enablement, and intraunit and interunit relations within and across workgroups all make more sense here. Although the government agency was far from customer driven in any context, the culture there was more informal and focused on appreciating people's contributions rather than billable hours which apparently manifested a similar pattern among the climate ratings given. In sum, while climate is indeed a distinctly different construct from culture, group and team climate at the collective level does appear to mirror the overall tendencies of the larger cultural context. Given this summary, it should not be surprising that similar results were also found with respect to importance ratings.

Interestingly and also worthy of further examination was the fact the lowest levels of manager-team member agreement (and the only one that was found to be significantly different following a Scheffé comparison) were among the teams from the government agency. Whether this is a reflection of the lack of self-awareness among this specific sample or indicative of some other type of rating effect is difficult to say. Given prior research on self-awareness with government samples (e.g., Church, 1997), however, it may well be that this group is in fact significantly less aware of or attentive to their own behaviors and surroundings, compared with leaders and managers in private organizations.

Next, in order to test the relationship between workgroup climate and feelings of enablement, a multiple regression analysis was conducted using enablement as the dependent measure and the six climate subscale scores as the predictors. Although shared method variance is always a concern in this type of analysis (i.e., when using ratings from the same group on different constructs), the moderate outcome of the regression model did not suggest that this was a serious concern. More specifically, the six climate subscales accounted for a total of 42% of the variance in enablement ratings $F(6,1329) = 158.36$, $p < .001$). With respect to the predictors, five of the six factors yielded significant betas, with *participation* and *standards* being the strongest by far ($B = .27$, .26 vs. .12 for *clarity*, .11 for *recognition*, and .08 for *intergroup relations*). Interestingly enough, when the manager ratings on the same six subscales were added to the equation, no additional variance was explained. The addition of the manager-team member profile agreement index also failed to contribute to any new unexplained variance. In short, while the strength of the team climate itself was a powerful predictor of feelings of enablement, manager's own perceptions and their level of awareness with respect to climate strengths and weaknesses were unrelated to how empowered team members felt.

Although the self-awareness agreement index failed to yield a significant additive effect beyond the member climate ratings, a final set of analyses were conducted to examine the possibility of a relationship between climate based self-awareness on the part of the team manager and feelings of enablement using the four category method of computing manager-team member agreement (which is sensitive to different types of results from the profile agreement method). Based on a significant ANOVA model with organizational sample (for control purposes) and agreement group as the independent variables, it was apparent that agreement group did contribute significantly to members' feelings of enablement $F(3,1316) = 86.87$, $p < .001$. An examination of the post-hoc Scheffé comparisons indicated that the highest levels of enablement ($M = 4.05$) among team members were experienced in those groups with higher climates and managers who were able to accurately assess the level of the climate in their group. The next highest level of enablement ($M = 3.95$) was experienced by those members in groups with managers who were more modest in their ratings of climate (i.e., less accurate) but still had higher climate ratings overall. Means for accurate managers from lower rated climate groups ($M = 3.67$) were not significantly different than for those from the over-rating manager groups ($M = 3.61$).

Summary

In summary these data indicate that workgroup climate does indeed play an important role in employees' feelings of enablement. While managers' self-perceptions of climate did not contribute much to the predictive equation, there was a positive additive effect on enablement when the climate was strong *and* managers are aware of this fact. In other words, under positive circumstances managers did appear able to capitalize on a positive group dynamic. Future research is needed, however, to better understand what managers can do to help improve less positive group situations.

In addition, the six factor model of climate described here proved to be quite robust in nature. The analysis of potential individual moderators suggested little in the way of effects by gender, age or team size. This finding, in and of itself, argue for the use the six dimensions as outlined above for future climate conceptualization and research. In fact, the variable with the strongest impact on group and team climate appeared to be the nature (e.g., culture) of the organization itself. As suggested by the pattern of subscale results observed across the various settings, the climate among individual teams within an organization, at least at the aggregate level, appears to reflect the strengths and weakness of the larger organizational culture as well.

As with any study there are a number of limitations inherent in this research. First, though the sample is quite diverse, the instrument and model have still to be tested across a truly broad range of individuals and teams across all types of organizational settings (e.g., government, academic, family business, volunteer, health care, etc.). Second, the majority of the teams here represented either senior or middle management levels and thus patterns could be quite different with lower level and front-line employees. Third, although team member demographics would have been useful, these data is often unavailable and uncollectable due to confidentiality concerns on the part of participants. Finally, though it would be helpful to have additional measures for comparative purposes (e.g., reflection leadership style, managerial behavior, organizational culture, etc.), the instrumentation used across settings varied so much as to be totally incomparable. Future research should be directed at measuring climate on these factors and other aspects of individual and collective behavior for more detailed levels of analysis.

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The Relationship between Organisational Commitment and Organisational Climate

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The purpose of this study was to explore the relationship between organisational commitment and organisational climate. Subjects were chosen from three large Australian automotive component manufacturing companies. A questionnaire was administered to both white and blue collar employees in English, Vietnamese and Cambodian languages. 1,413 respondents from forty-two different countries of origin were surveyed with a 97.8% response rate, yielding 1,382 usable questionnaires. A significant correlation (.66) between organisational commitment and organisational climate was discovered.

Keywords: Commitment, Climate, Culture

Denison (1996) has suggested that organisational climate and organisational culture are two major approaches to understanding organisational behaviour. Climate shares similar elements with commitment in that they are both psychological concepts that refer to behaviours. Sharing two psychological and behavioural attributes, there could be a relationship between the two concepts within the workplace. This study attempted to advance the understanding of both organisational commitment and organisational climate in the workplace.

Organisational Commitment

Organisational commitment has been defined as a measure of an individual's dedication and loyalty to an organisation (Cohen & Kirchmeyer, 1995; Meyer and Allen, 1997). It is viewed as an important variable in facilitating the understanding of an employee's workplace behaviour (Bateman & Strasser, 1984) for it has the potential to predict organisational outcomes such as performance, turnover, absenteeism, tenure and organisational goals (Meyer & Allen, 1997).

Organisational Climate

Researchers have investigated organisational climate for over thirty years. These studies appear to have reached a consensus that organisational climate is a psychological, multi-dimensional, complex phenomenon, which has its intellectual roots in "Koffka's (1935) 'behaviour environment' and Lewin's (1936) notion of "life space" within Gestalt psychology (Fink & Chen, 1995; Schneider, 1985; Joyce & Slocum, 1982).

Organisational climate may be defined as "a characteristic of an organisation which . . . embodies members' collective perceptions about their organization with respect to such dimensions as autonomy, trust, cohesiveness, support, recognition, innovation and fairness…" (Moran and Volkwein, 1992. P.20).

The Relationship Between Work Commitment and Organisational Cimate

The question addressed in this study was whether there was a relationship between organisational climate and the organisational commitment construct. A review of the literature identified no study that had specifically set out to test those relationships. However, there is some support for the concept that individuals' perceived relationships with their supervisors may predict organisational commitment. Several studies have also made indirect mention of

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various variables, such as autonomy and trust, which were interpreted as dimensions of organisational climate and that represent individuals' perceptions of their relationships with their supervisors in the workplace.

Researchers have suggested that autonomy (Wallace et al, 1996), supervisor support (Benson, 1996) and cohesiveness (Buchanan, 1974) relate positively to organisational commitment. Further, Steers (1977) found a relationship between the autonomy and trust dimensions of organisational climate and commitment. According to Loiu (1995) trust is associated with other organisational activities such as organisational change and development (Golembiewski, 1986), and organisational effectiveness (Culbert and McDonough, 1986).

Fink (1992) proposed that organisational climate tended to be positively related to employee organisational commitment. For example, in his study, organisational climate was positive when organisational commitment was high. His empirical study about work commitment in two US manufacturing companies corroborated Herman's (1991) qualitative doctoral study of company spirit, where organisational climate was broadly defined as "the feel of the workplace" (p. 12).

Iverson, et al. (1995) conducted a study in a public hospital where they found "that organisational commitment and trust appeared to be significant determinants of organisational performance" (p. 12).

Research Questions

The following research questions emerged from the above studies: (1) Is there a relationship between organisational climate and commitment, and (2) how are the two constructs related? The examination of these concepts should have both theoretical and practical implications for understanding workplace behaviour. The null hypothesis tested in this research study, derived from the research questions, may be stated as follows: There is no association between organisational commitment and organisational climate.

The Measurement of Organisational Commitment and Organisational Climate

A number of measures of organisational commitment can be found in the literature (Cook and Wall, 1980; DeCotiis and Summers, 1987; Hrebiniak and Alutto, 1972; Mowday, Porter and Steers, 1982; Oliver,1984 Ritzer and Trice, 1969); however, the most widely used scales are those by Meyer and Allen (1984) and Porter et al (1974). Of the instruments that have been mainly used, Porter et al's (1974) Organisational Commitment Questionnaire (OCQ) is attitudinal and Meyer and Allen's (1984) is behavioural. In addition, Ward & Davis (1995:38) consider Allen & Meyer's behavioural organisational commitment measure superior because of its ability to capture the multidimensional nature of the commitment construct as well as its high reliability and supportive factor analysis. Cohen (1996) agrees with that assessment, leading us to use the Meyer and Allen measure in this study.

The Allen & Meyer measure evaluates a psychological state that is manifested in behaviour. Such an operational definition makes organisational commitment compatible with measures of organisational climate and offers a theoretical framework from which to view the relationship between organisational commitment and climate. Measures of organisational climate have been predominantly derived from aggregated organisational member's perceptions. Several studies have distinguished organisational climate from other organisational constructs, such as organisational commitment (Jablin, 1988), job satisfaction (La Follette & Sims, 1975; Ticehurst & Ross-Smith, 1992), communication satisfaction (Downs & Hazen, 1977), job attitude (Waters et al, 1976), and organisational structure (Lawler III et al., 1974). Koys and DeCotiis (1991) developed a measure of organisational climate. A modification of this instrument was used by McMurray (1996) to study a university environment, where it was found that the instrument needed to be adapted for use in a different organisational sector. For this reason the Koys and DeCortiis instrument, with language modifications to render it more suitable for the new environment and with the addition of other variables derived from interviews with personnel in the different companies, was used in this research.

Research Methodology

Subjects. Three large automotive component manufacturing companies were chosen for the study as being representative of the Australian manufacturing industry. Both white collar and blue collar workers completed a survey, which was administered in English, Vietnamese and Cambodian languages. Fieldwork was conducted over a seven-month period commencing with the development of a survey instrument through pre-testing, pilot studies, and final collection and analysis of the data. The study was fully supported by the management of the three companies who provided time for survey completion during normal working periods, when successive groups of workers were given time off to visit a survey venue and to complete the questionnaire. In Company B and C there were three rotating shifts (morning, day and night) and in Company A there were only two shifts (day and night). The researcher made face to face contact with each respondent and was also able to gain valuable feedback on respondent's thoughts. This support for the research, and the fact that the researcher first spent a month at the different companies' premises becoming acquainted with the staff, resulted in a 97.8% response rate. Information was collected from respondents from forty-two different countries of origin and a population of 1,413 workers with 1,382 usable responses.

An examination of the relevant literature and exploratory fieldwork, laid the foundation for three stages of data collection. In the first stage, documentary analysis, fieldwork and focus group meetings, in each Company, determined the content of the Organisational Climate survey instrument which was then pre-tested. Results from the pre-test were used to modify the survey instrument in preparation for a second pilot study. The pilot study was a miniature of the main study and was formally administered in the same manner as the main study. During this stage, the researcher also asked two open-ended questions that related to the respondents' perceptions of the survey and its contents. An analysis of the pilot study data revealed that the survey was reliable, with a Cronbach Alpha value greater than .80 for both of the climate and commitment instruments.

Development of the Commitment and Climate Constructs

The Allen & Meyer (1990) organisational commitment instrument used in the research was examined for construct validity and reliability. The total data-set was first separated into odd and even numbered respondents to give two randomly selected sets of data. Using the even numbered response data-set, the questions in each of the three categories of normative, affective and continuance commitment identified by Allen & Meyer and included in the data-set, were explored to see whether they formed valid constructs, using confirmatory factor analysis by means of the EQS programme (Bentler, 1989). The proposed model did not fit the data (GFI = 0.85 SRMR = 0.75). Hence, the data that had been collected demonstrated that the dimensions identified by Allen & Meyer (1990) did not form a valid second order instrument for measuring organisational commitment in an Australian shop floor manufacturing environment. This was in accordance with the result reported by Cohen (1996), who also found that a second order construct did not fit his data.

In consequence of this, the data were analysed further. The total set of questions was factor analysed using the maximum likelihood method and a promax (oblique) rotation (SAS /STAT, 1988). The use of an oblique rotation in factor analysis is considered to be more theoretically correct (Loehlin, 1992, p.168), since factors may not necessarily be orthogonal in nature. This process produced five factors based on an examination of the scree plot. These factors did not fit the original categories used in the questionnaire make-up with no clear identification of the dimensions represented by some of the factors. Inspection of the factor loadings showed a heavy loading of items onto the first two factors, with a reduction in the number of items and loading values on the remaining factors. Churchill (1979) has indicated that a failure to match an expected factor structure can be the result of "noise" arising from the incorporation into the data set of some incorrect items that should be eliminated. This result, therefore, suggested that the dimensions which had been included by Allen & Meyer (1990) could have contained some elements which were not truly part of an organisational commitment measure in a shop floor manufacturing environment, and that the measures in these dimensions were confusing the factor extraction process.

In order to examine the problems with the second order factor structure, the factor analysis results for the even numbered respondents were further inspected and variables with low communality values were noted and eliminated from the data-set. This process resulted in a data-set with ten variables. Allen & Meyer (1990) have suggested that there were three component factors of organisational commitment, namely affective, normative, and continuance. However, further factor analysis of this data-set yielded only two factors. The first factor was comprised of elements relating to both normative and affective dimensions of commitment. The second factor included elements of only normative commitment. The two factors, therefore, appeared to reflect modified normative and affective dimensions of commitment which were respectively labeled attachment and detachment commitment. Continuance commitment was not a component in this analysis. The reason for the absence of this component could not be readily identified. It may have related to the social security system in Australia in which workers may feel that they are ensured of a reasonable standard of living even if they leave employment. An alternative reason could be that the people surveyed were mainly blue collar workers who felt that movement from one employer to another would pose few if any problems. A combination of both of these possibilities was also feasible. It would appear from this analysis that the components of organisational commitment may vary under different circumstances.

The two dimensional model of organisational commitment, identified by the factor analysis, was now tested using confirmatory factor analysis on the odd numbered respondents from the data-set. A valid second order structure was obtained and the fit indices are shown in Table 1.

The goodness of fit measures indicated a reasonable fit (Hair et al. 1998; Nunnally & Bernstein, 1994) and, therefore, the organisational commitment construct could be viewed as showing an acceptable level of construct validity. The second order organisational commitment construct was also tested for reliability, and an acceptable Cronbach Alpha value of .82 was obtained (Nunnally and Bernstein, 1994).

The scores obtained on interval-type rating scales were used to test the construct validity and reliability of an overall second order Koys and DeCotiis (1991) organisational climate model. As in the case of the organisational commitment construct, the data-set was divided into two parts. For this purpose, a confirmatory factor analysis was conducted using the even numbered data-set and the EQS programme (Bentler, 1989). The fit values suggested that the solution obtained from the data was very different from that suggested by the relationships depicted in the model and, hence, that the Koys and DeCotis model did not represent a good fit and did not form an adequate second order instrument.

In consequence of this, the data were further analysed using the even numbered response data-set. Factor analysis produced four factors that did not represent the original eight categories used in the questionnaire make-up. There was also no clear identification of the dimensions represented by some of the factors. In this regard it should be noted that Koys and DeCotiis (1991) also found that the structure which they determined from an oblique factor analysis did not fully accord with their expected categorisation of items.

With respect to the four dimensions found in this analysis, two, namely autonomy and cohesion, corresponded to two of the eight dimensions of Koys and DeCotiis (1991). Two were amalgams of the other six dimensions identified by trust, support, fairness, recognition, pressure, innovation. The dimensions identified by the factor analysis were also examined for reliability using Cronbach alpha. Variables were eliminated where they were found to substantially degrade the overall alpha value.

Using the odd numbered respondents of the data-set, the identified dimensions were tested using confirmatory factor analysis to see whether they formed a valid second order construct. A LaGrange Multiplier test indicated that a few of the indicator variables were related to more than one factor, but since these linkages did not represent any substantive variation to the construct model, they were added. A good fit was found between the model and the data.

The goodness of fit measures indicated a good fit (Hair et al. 1998; Nunnally & Bernstein, 1994), so the organisational climate model was deemed to have an acceptable level of construct validity. The second order construct was also tested for reliability and an acceptable Cronbach alpha value of .94 was obtained.

Results

The null hypothesis that there is no association between organisational commitment and organisational climate was examined by developing and testing a structural model of this relationship. The model was tested using EQS (Bentler, 1995) and the goodness of fit measures indicated a good fit (Hair et al. 1998). The relationship model was considered to show an acceptable level of construct validity. The fit indices for this model are shown in Table 1 with a correlation of .658 between organisational commitment and organisational climate.. The hypothesis was, therefore, rejected.

Table 1.
Goodness of fit measures for the organisational commitment and organisational climate relationship model

Standardised root mean square residual (SRMR)	0.03
Comparative fit index (CFI)	0.94
Bentler-Bonnet normal fit index (NFI)	0.92
Bentler-Bonnet non-normal fit index (NNFI)	0.91
Goodness of fit index GFI	0.95
Adjusted goodness of fit index (AGFI)	0.92

The examination of the proposed relationship model indicated that organisational climate, specifically recognition, support and trust dimensions, were significantly and positively related to attachment and detachment dimensions of organisational commitment. This result indicated that when a respondent's orientation to organisational climate is positive, then their orientation to organisational commitment is also positive. When the respondent orientation to organisational climate was negative, then the orientation to organisational commitment was also negative.

Discussion

Fink, (1992) and Iverson (1995) suggested that there was a relationship between organisational climate and commitment, but no previous study had specifically tested to see whether the two constructs were statistically related, and to determine the structure of such a relationship. This research showed that the two constructs were significantly and positively related.

The literature also contained studies that suggested a strong relationship between affective commitment and absenteeism (Deery et al. 1992; Goff et al. 1990; Meyer & Allen, 1997). Where there was a negative (or low) affective commitment, absenteeism was high. Although this study did not seek to examine absenteeism, the qualitative data revealed that high absenteeism rates were an issue in the companies studied. Comments by both chief executive officers (CEOs) and human resource managers (HRMs) clearly suggested that absenteeism was problematic and was one of their priority challenges. As an example, one respondent said:

"Bloody hell…I don't know what to do anymore…I have tried everything to fix it…We are so good to them…they get more money than anywhere else…they get free uniforms…incentives…and still they don't turn up to work… bloody spoiled… that's what they are…don't know when they got it bloody good".

The statements by the CEOs and HRMs also suggested that the affective and normative components of organisational commitment were low in their manufacturing industries. There was a negative orientation to the recognition, support and trust dimensions of organisational climate in the businesses which were surveyed. The model suggests that there should then be a correspondingly low level of organisational commitment. This seemed to be reflected in the absenteeism problems.

Conclusions

The positive correlations between organisational commitment and organisational climate scores clearly showed that organisational climate was significantly and positively related to organisational commitment.

Promoters of commitment

Organisational climate perceptions are constructed by employees through processes of meaning and attachment (Joyce & Slocum, 1990). The perceptions represent an employee's cognitive processing of external stimuli, such as the relationship with one's supervisor. If that is the case, then immediate blue-collar supervisors, leading hands and foremen are pivotal in fostering positive organisational commitment.

Commitment and National Culture

The relationship between organisational commitment and organisational climate also indicated that it is the employee's interactions with their fellow co-workers which include supervisors, foremen and leading hands, that strongly influence organisational commitment. In the case of blue-collar workers in the manufacturing industry, the power distance between shop floor supervisors, foremen, leading hands and shop floor employees is not that great. In Australia, the National culture is often referred to as one of "mateship." Mead (1990) has noted that supervisory and subordinate relationships are culture driven. This could very well be the case in this instance with supervisors creating workplace relationships with their subordinates that instill historical Australian cultural characteristics of mateship based on loyalty and obligation.

Contribution from the Study

Ideally, science encompasses an interconnectedness of principles, laws and often other general statements which result in theorems relating to facts (Medawar, 1984). It is only when science has this interconnectedness at the foundational level that stability and the power to build more information may occur. The results of this study are a contribution to the interconnectedness at the foundational level in that the results have evaluated the interrelationship between organisational commitment and organisational climate which, in turn, has advanced our understanding of the existing work commitment literature.

Implications for Human Resource Development

Earlier studies have postulated that organisational commitment is intertwined with organisational culture (Legge, 1995). Some studies have also shown that organisational culture and organisational climate are integrated (Denison, 1996) and inter-subjective (McMurray, 1993). If organisational climate and organisational commitment are significantly related, as shown in this study, and both concepts are related to organisational culture, the implication strongly suggests that organisational culture is common to both concepts. Organisational commitment is related to organisational outcomes such as productivity, effectiveness, efficiency, and performance (Meyer, & Allen, 1998). The theoretical framework coming out of this study (Figure 1) provides a model for working with culture and commitment to strengthen commitment in an organization.

One way to develop organisational culture and commitment is for managers to build on existing beliefs in such a way that the new message resonates with an old belief, the building blocks of organisational climate, because organisational climate appears easier to develop and change than organisational culture (Hofstede et al. 1993). Since value is a core feature in the concept of climate, it is critical that those at the lower organisational levels, such as supervisors and shop floor employees, are made to feel valued by the higher level organisational leader.

In the manufacturing industry, this would be at the supervisory level. Supervisors operate under many constraints, such as time limitations, where task issues take priority over relationship issues (Schein, 1994). This was evidenced in this study by the following supervisor's comment:

"...I have to talk to different people in different ways - can't talk to everyone the same way, one your short to, others more soft, very difficult when... not much time eg I only have 1 minute to get message across".

Comments such as that illustrate the need for training at the supervisory level in the manufacturing industry, especially in communication and cultural diversity skills, as various cultural dimensions, notably collectivist and individualist, have been shown to directly affect communication styles (Gudykunst et al, 1996).

Sorcher and Meyer (1968:26) suggest that organisational culture training activities may help an employee identify more with the organisation . When an employees participate in any training activities, they are likely to identify with an organisation's climate which may positively influence their organisational commitment. Training activities could be used by supervisors to create a positive organisational climate. Organisational climate is situational and subject to being manipulated by individuals in power (Dennison, 1996). Organisational commitment could be enhanced by using organisational climate as a management tool.

It could be surmised, then, that the organisation's commitment to its employees influences employees' commitment to the organisation. One way to foster employees' commitment and involvement in the organisation would be for leadership to actively demonstrate their commitment to the employees through either training or visibility and accessibility (Smith, 1999). This is in line with the comments of Elsey (1997) who states that organisations, in order to survive, should be responsive to their environment and emphasize commitment to the development of their workforce.

Organisations might benefit from a review of their existing resource management and development policies, for it is evident that training should be implemented at the lower organisational levels, rather than at higher management levels, as is the popular belief. For training outcomes to be effective, they need to be accessible to the masses, i.e. closest to the worker at the supervisory level. The findings of this study in relation to the second order organisational commitment construct, where attachment and detachment commitment elements were significant in the manufacturing workplace, support this assertion, for acculturation occurs within immediate work groups and among peers. Supervisors, foremen, and leading hands have long been overlooked in their pivotal role in the acculturation and socialisation processes of employees.

Limitations of the study

This study was carried out in an Australian setting using a mixed group of both supervisory and blue-collar workers from different countries of origin. The results of the study are, therefore, specific to these circumstances and extrapolation of the results to other settings and cultural environments may not be suitable without further evaluations of those situations.

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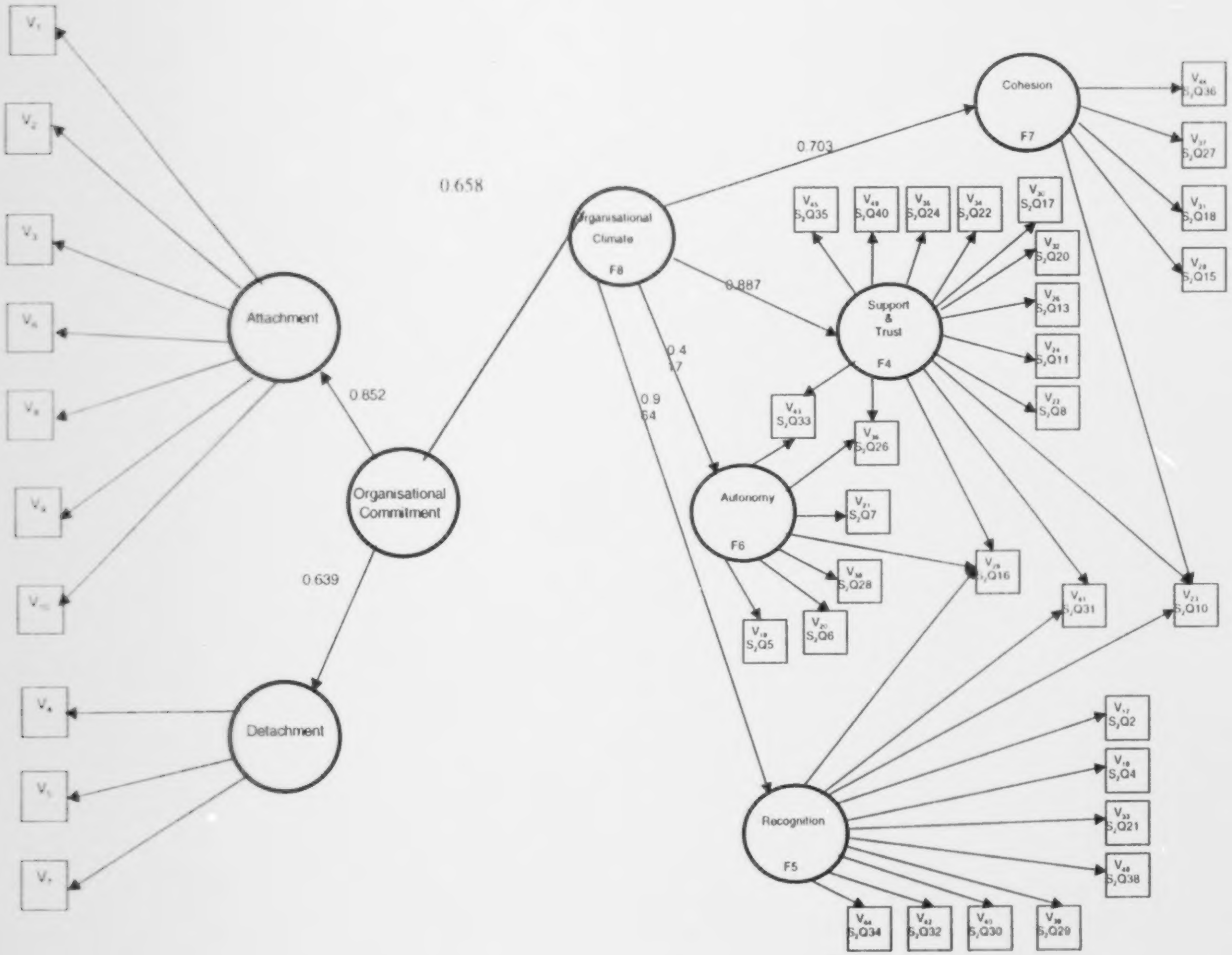
Organisational Commitment
Attachment
Detachment
0.852
0.639
0.658
Organisational Climate
F8
0.703
Cohesion
F7
0.887
Support & Trust
F4
0.4 17
0.9 64
Autonomy
F6
Recognition
F5
V1
V2
V3
S2Q36
S2Q27
S2Q18
S2Q15
S2Q35
S2Q40
S2Q24
S2Q22
S2Q17
S2Q20
S2Q13
S2Q11
S2Q8
S2Q33
S2Q26
S2Q7
S2Q16
S2Q28
S2Q5
S2Q6
S2Q31
S2Q10
S2Q2
S2Q4
S2Q21
S2Q38
S2Q34
S2Q32
S2Q30
S2Q29

Figure 1.
Relationship Between Organisational Commitment
and Organisational Climate.

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Action Learning as a Vehicle for Organizational Culture Change

Susan R. Meyer
MTA NYC Transit

Action learning's focus on concrete problems makes it a potentially powerful vehicle for introducing new norms for open communication, team learning and critical reflection into a structured, pragmatic organization. Preliminary feedback from an ongoing two year action learning program indicates that managers who participated in the program recognize the need to change and may be beginning to adopt these new norms.

Keywords: Action Learning, Organizational Change, Management Development

MTA NYC Transit, like many organizations, is grappling with the need to become increasingly flexible and responsive in a climate of change. Transit is a highly structured, hierarchical, paramilitary organization seeking to improve succession planning and to broaden the pool of managers involved in innovation, problem solving and decision making. The Sr. Vice President for Subways wants to begin to break down organizational norms against open, cross-divisional communication, promote systems thinking and change managerial practices. The central question addressed in this study is: Can Transit use an action learning program to foster this culture change? Three questions related to changing the cultural norms for problem solving emerged:

1. Is there evidence that participants in the Action Learning sets moved from an instrumental to a critically reflective approach to problem solving and decision making?
2. Is there evidence of movement within the organization from closely held decision-making to widespread involvement in problem solving?
3. Is there evidence that program participants became empowered to implement the solutions they proposed?

These questions can not be fully explored in the short term and will be studied over a two year period. As the program continues to unfold, the effectiveness of the General Superintendents' Program in improving problem solving abilities is being evaluated by the organization and the researcher in terms of:

1) number of solutions implemented and
2) effectiveness of solutions as measured by performance statistics on selected subway lines.

The effectiveness of the General Superintendents' Program in fostering culture change is being evaluated by the researcher in terms of evidence of change as measured by:

1) increased involvement of the participants' subordinates in problem solving efforts and
2) evidence of new or improved cross-functional and interdivisional communication.

Background

NYC Transit has approximately 47,000 employees in two operating departments (Buses and Subways) and ten support departments (Human Resources, Legal, etc). Over the past five years, the organization has faced major challenges including moving to increased reliance on fare box revenues rather than government funds, layoffs of operating personnel, increased reliance on computer technology in all phases of the operation, and increased ridership. It is slowly evolving from a rigid, highly structured organization to one with the flexibility needed to function successfully in today's environment

The Department of Subways, in particular, is faced with several unwieldy management dilemmas. It is the largest department within the organization. Within this department, each division is the size of the average private business and has its own personality. Divisions tend to attempt to function autonomously, rarely acknowledging that they are interdependent and all working towards the same goal. Traditionally, managers have been promoted from within the organization, perpetuating a closed "old boy's" network of predominately white, only male, executive managers, many of whom have had a series of different reporting relationships over the years.

Most managers are not college graduates and many have more than 30 years experience, often in only one division within the Department of Subways. As a group, they tend to be suspicious of changes in management style and tend to accomplish goals through reliance on personal relationships. The most senior managers tend to prefer

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unilateral control to shared authority and tend to be suspicious of college graduates, women, many minority groups and anything that questions continuing past practices. Decision-making authority continues to be seen as the purview of only the most senior managers. Communication between senior, middle, and first line management is inconsistent and incomplete.

The Sr. Vice President of Subways is concerned with the professional development of his senior and middle managers. He feels they lack good problem-solving skills and further feels that they are unable to present their ideas forcefully. He recognizes that, if the organization is to remain successful, managers will need to learn how to think and act differently. As Marsick (in Mezirow and Associates, 1990) points out:

> (t)oday, workers at all levels are called upon to think differently and more deeply about themselves, their work, and their relationship to the organization. This is nowhere more evident than in the ranks of managers, whose very survival is threatened by mergers and acquisitions, downsizing, and flattening of the organizational pyramid.

The General Superintendents' Program

In 1998, the Sr. Vice President of the Department of Subways requested training that would involve his senior managers in strategic thinking, improve their problem solving skills and assist them in making effective presentations. An Action Learning program, following the Experiential model (Yorks, O'Neil and Marsick, 1999), was designed to address these concerns by involving senior managers in developing proposals for solutions to real organizational problems.

Action Learning was selected as the appropriate vehicle because of the potential for providing a relatively protected environment within which participants could begin to interact differently across organizational barriers. The literature (Marquardt, 1997, Watkins and Marsick, 1996, Yorks, O'Neil and Marsick, 1999) showed the effectiveness of action learning in providing a forum for solving difficult concrete organizational problems. Prior experience with Supervisory and Managerial training within Transit had shown that the opportunities to meet and interact with peers across departmental and divisional barriers were rare.

Three problems were posed by the Sr. Vice President to each of the two groups of participants. One primary concern for the organization was that, due to increased ridership, crowded conditions had increased. Pressure from consumer and political groups to alleviate this situation was constant. Overcrowding, then, became the first of three problems to be addressed by the Action Learning sets. The second concrete problem to be addressed was that announcements were often unintelligible, not heard at all or inconsistent. The third problem, less concrete, but with broad organizational implications, was how, in an environment where divisions and units were often operating in a vacuum or at odds with each other, to improve teamwork within the department.

The pilot program utilized a structured problem solving and decision making model. Two groups of fifteen General Superintendents met in six facilitated action learning sets and as a large group over a ten day period. Participants were selected from each of the divisions within the department of Subways. Groups were formed to reflect the widest possible diversity based on job function, gender, ethnicity and age. Each group was assigned one of the three concerns. They researched the current state and ideal future state in order to make specific proposals for improvements.

At the end of the initial training, each group presented proposals first to the Sr. Vice President, then to the President and Executive Vice President. The groups were charged to research and develop their proposals over a two month period, after which specific implementation plans were presented to all the Sr. Vice President's direct reports. For the balance of the year, the six sets were collapsed into three – one for overcrowding, one for announcements and one for teamwork. They continued to work on implementing fifteen specific solutions, with a target of full implementation by December, 1999.

Methodology

A case study approach is being employed to study the impact of action learning on the problem-solving, decision-making and communication processes within the Department of Subways. The researcher was part of the design team for this project and facilitated the two sets working on teamwork. Data collection includes: program evaluations, critical incident reports, interviews with participants, memos/minutes documenting meetings, documentation of solutions implemented, and pre/post comparison of performance indicators including on-time performance statistics. The data collection will continue through the second year of the program, when another three groups are expected to complete the program. Data will be interpreted in terms of theory related to action learning, culture change, and Senge's (1990) five disciplines.

Two organizational crises have impeded the collection of data about the first year of the program. The group had planned to host the first annual conference in early December, 1999. Conference plans included presenting the proposals this group had developed to all Subways managers and putting in place a feedback loop that would involve these middle managers in the problem solving process. The threat of a strike led to the conference being postponed. Thus, information about how successful the group was in expanding the problem solving network is not yet available.

The General Superintendents were unavailable for interviews during their involvement in strike plans and continue to be unavailable as the organization gears up for the increased demands of providing service for New Year's Eve and preparing for possible Y2K disruptions. Data collection to date has therefore been limited to a review of program documents and of responses to a questionnaire based on Rothwell's(1999) questionnaires for evaluating action learning.

Results from the Action Learning Sets

During the initial phase of the program, participants were able to work together across division lines to research problem causes and generate possible solutions. The initial program resulted in fifteen proposals. They are a mixture of new ideas and an expansion of pilot programs the groups found to already be working well. Proposals addressing overcrowding are:

- Expand the "step aside" (platform markings) pilot program to keep customers on the platform from blocking the doors upon entering and exiting trains
- Introduce new materials to improve visibility and longevity of "step aside" boxes
- Develop a media campaign to educate ridership about "step aside" boxes (publicizing the boxes and the "step aside – speed your ride" slogan)
- Expand "step aside" concept to include markings on train car floors and doors
- Increase the number of platform conductors (used to facilitate customer flow)
- Adjust schedule for extra trains during morning rush (adding "put-in" trains from spur tracks and adjusting turn-around points)
- Increase scheduled maintenance systems in order to decrease potential delays in service
- Expand the use of countdown clocks (to measure time until scheduled departure) to increase awareness of dwell time in stations

Proposals addressing quality and consistency of customer announcements are:

- Purchase wireless radios that will allow Station Agents to communicate freely with others in the system
- Install a mass call system linking Rapid Transit Operation Control Center to Stations Department Service Booths to provide real time information on subway service (routes a single call to many locations)
- Update and expand distribution of "Blue Book" (compilation of standardized announcement formats) to include station and platform personnel as well as conductors

Proposals addressing teamwork are:

- Cross train managers and supervisors across divisions (to increase knowledge of other areas and promote systems thinking)
- Establish partnering committees of General Superintendents across divisions (to encourage joint problem solving efforts, increase open communication and promote systems thinking)
- Implement a crossfunctional restructuring of IND night operations that will physically co-locate General Superintendents (to facilitate open communication, joint problem solving efforts and systems thinking)
- Implement an annual managerial conference and workshop (to involve middle managers in problem solving and promote open communication)

The program can be deemed successful by the first of the organization's criteria. All but two of the proposals have been at least partially implemented. The problems relating to implementing the remaining two, implementing a crossfunctional restructuring of IND night operations that will physically co-locate General Superintendents and expanding the "step aside" concept to include markings on train car floors and doors, demonstrate the strong hold of the old management paradigm. Selecting a location for the IND office has not moved forward because, even though the change would be in their best interests, none of the three departments involved is willing to contribute suitable space. Despite pressure from the Sr. Vice President, the executive manager responsible for train cars refuses to allow the "step aside" decals to be put in "his" trains.

The program will be evaluated during the next year in terms of the effectiveness of the solutions implemented. Statistics are generated on a daily basis about dwell time in stations and about train delays. These statistics are generated by station, line, date, and time of day. Dwell time data will be compared for the same time periods and equivalent dates (in terms of usage patterns) for stations where step aside boxes are in place. Data will also be compared in terms of causes of delays on lines where train and maintenance schedules have been changed.

Findings

Over the past fifteen years, a number of needs assessments conducted by Transit, including an MTA-wide study by the Wharton School, have indicated that there is a lack of teamwork and interdivisional cooperation within Transit. This is coupled with and related to a perceived lack of leadership ability in Senior and Middle management. Within a closed culture with an emphasis on hiding information, seeking to place blame and operating only in one's own best interest, it is difficult for potential leaders to emerge. Prior to this action learning program, many of the General Superintendents had never met face to face, even though some shared areas of responsibility. Few were familiar with divisions other than their own.

> *S – Normally, I don't meet too many new people from other departments, let alone work with them and use some of their ideas.*

For this population, then, any evidence of open communication, sharing of ideas and information or team effort represents a significant culture shift.

Of the initial group of 30 General Superintendents, by November, 1999, only sixteen remained actively involved. Three more were occasionally active; four had retired; two were promoted. The remaining five simply disappeared. There were varying perceptions about the need for ongoing participation ranging from seeing it as mandated by the Sr. Vice President through seeing this project as important to the future of the organization to viewing it as a waste of time. There was some bitterness expressed about the "dropouts" by those who felt unfairly burdened by the project. One felt that this kind of thinking was "not part of the job."

> *S – My future with the organization will not depend on this skill.*

All participants were sent a questionnaire relating to what was learned as a result of the action learning program. Thirteen participants responded. The four questions about learning, adapted from Rothwell's (1999) questionnaire were:

1. What do you think was the *single most important lesson* that was learned by your team as a direct result of the General Superintendents' Program?
2. What do you think was the *single most important lesson* that you, as an individual, learned by participating in this program?
3. What lessons do you believe the team learned from its experience?
4. What lessons do you believe that you learned from the experience?

Nilson (1999) describes culture as a system of shared meanings, values, and behavioral expectations. It is expected that, over time, the action learning program will result in a shift from valuing secrecy to valuing open communication, from valuing assigning blame to valuing seeking solutions, from protecting turf to acting in the best interests of the organization and a shift in behavioral expectations form passive and reactive to proactive. Although it is too soon to accurately assess any of these culture changes, there is some early evidence of greater cooperation between departments, as evidenced by interdepartmental implementation efforts that include individuals not part of the pilot groups. There are also interdepartmental problem solving groups in place at two levels – the cross training and partnering initiatives. These groups will be tracked over the next year.

There is also evidence of an awareness of the importance of teamwork, but it is too soon to tell whether the Generals will transfer what they learned in working together to how they work with their subordinates. Comments from the participants about increased teamwork include:

> *L - Solutions can be found or developed by people from other departments or from levels of management as low as G/S's or Supt's.*

> *C - The most important item that was learned is that new ideas from people in different departments open up lines of communication to each other. We had participants from Hydraulics, Track and Car Equipment discussing customer service issues, these issues are not faced by them on a daily basis. It gives us a better perspective on issues.*
> *S –The single most important lesson that was learned by the team in my opinion is that we all are faced with a (single) task and that is to accomplish our goals. In the past, different Departments and even different Divisions within each department operated as if that unit could operate autonomously.*

Evidence Of Movement From An Instrumental To A Critically Reflective Approach To Problem Solving And Decision Making

Mezirow (1990) discusses instrumental learning in terms of figuring out how to do something. Instrumental learning, with its reliance primarily on past practices and unexamined organizational knowledge, is the preferred style among Transit managers. As part of the problem solving process, participants in the action learning sets were asked to uncover and examine their assumptions about how things could be done. They were also asked to think about problems from multiple perspectives. They were encouraged to discuss and examine the reasoning behind current practices. Responses to the question about important team learning included evidence of movement away from an instrumental approach:

> *P – To see problems as opportunities for improvement not just from my perspective but from that of our customers and many other divisions that are affected in completely different ways. No matter how complex an objective might be when tackled systematically, bringing different perspectives to bear, potential actions soon become apparent leaving only the task of determining what the consensus is as to the most desirable, efficient, expedient plan to implement.*
> *S – In my environment, I must act on impulse. Usually there isn't much time to work though a process. I take great pride in going at a task head on and arriving at a solution, and then putting that solution into action. The process of problem solving learned in this session helped me to see that even though the process is slower, it can also be rewarding, once a solution is reached.*
> *C – By getting people together to face tough problems, the ideas and solutions flow more quickly and give us a better way to solve problems. Individuals in different ideas broaden horizons on how problems can be solved, the interaction of ideas (both good and bad) offered us a glimpse into new problem solving ideas.*

Evidence Of Movement Within The Organization From Closely Held Decision-Making To Widespread Involvement In Problem Solving

There is insufficient evidence at this time to address this question. So far, there is mixed evidence that the participants are moving in the direction of involving subordinates I decision making. The conference steering committee stated as a goal involving their direct reports in the process, but failed to include a feedback process in their conference design, preferring to devise a process once data was collected during the conference. One positive note is that shortly after the initial training, one participant reported using the problem solving process he had learned to involve his subordinates in solving a problem.

Evidence That Program Participants Became Empowered To Implement The Solutions They Proposed

Early evidence would indicate that progress will be slow in this area. Some projects that met current management goals or that seemed not to be controversial were either actively supported or at least not thwarted. Others, as described above, despite clear support from the Sr. Vice President, were subverted. Participants noted this uneven support:

> *L – Only at the beginning. Once original presentation was over upper management gave little to no support. Some assignments given to individual General Superintendents required support from the Chief level. Some Chiefs resisted but did not go to (the Sr. Vice President). They just delayed the process.*
> *C –In the beginning there was tremendous support; it waned over time.*

W –The team received some support, but in many cases upper management was not aware of the program, and in other cases, they offered only "lip service".
A – Initially, yes, but not throughout the program.

Discussion

By the end of December, 1999, data collection has not proceeded sufficiently to present any conclusions or recommendations. The data available, however, is sufficiently intriguing to warrant further study of this group. The conference will be rescheduled for early 2000 and will provide data about involving middle managers in problem solving efforts. If involvement is extended to that level, it will represent a major shift in the organization.

Over the next three months, all remaining program participants will also be interviewed and asked to provide critical incident data relating to opportunities to use problem solving skills, to cooperate across divisions and to involve subordinates in problem solving activities.

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Confronting Professional Values and Ethical Issues: An Innovative Session on Development of a Casebook on Ethics and Integrity

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This innovative session addresses the need for a casebook on ethics and integrity to support the newly developed AHRD Standards on Ethics and Integrity. The casebook should present a comprehensive rang of contemporary ethical issues in HRD that are integral aspects of the professional role of HRD scholars and practitioners. The casebook should also provide HRD professionals an awareness of the ethical standards of the profession, and a vehicle to help them examine how ethical standards apply to specific situations. In addition, a forum for participants to achieve a deeper understanding of the AHRD Standards on Ethics and Integrity is needed.

Keywords: AHRD Standards, Codes of Ethics, Casebooks

Purpose of the Session

This innovative session has two main objectives. First, the session is a forum to encourage and continue the collegial discussions and dialogue on professional ethics. This discussion stems primarily from the keynote session at the 1999 Academy of Human Resource Development (AHRD) conference where the *Standards on Ethics and Integrity* were presented to the AHRD membership for the first time. At the same time, the session will focus on a Casebook, which will be the first supporting document developed to enhance the *Standards*. A case study will be presented to participating Academy members along with a format for writing a case study. In addition, participants will model and practice writing a case study in a small group, and most importantly, the session is designed to encourage and motivate participants to submit case studies to be included in the casebook.

The present paper provides some background to the Innovative session. It begins by describing the need for a case study book on ethical issues in HRD. Then it provides a brief history of AHRD-focused discussion and efforts on issues of ethics and integrity. Then the paper provides a theoretical framework for concerns regarding HRD ethics as well as the use of case studies for didactic purposes. The paper concludes with a description of the Innovative Session planned for presentation at the Academy meeting.

Need for Case Study Book

The Academy of Human Resource Development has been discussing the need for ethical guidelines for several years. In February of 1999, Elwood Holton III, AHRD President, communicated with the membership via the AHRD *Forum* that there were three new initiatives that would take AHRD to a new level of leadership in the HRD profession. One of the three initiatives was the development of the AHRD *Standards on Ethics and Integrity*. He suggested that these standards are a key step in "putting a stake in the ground to define what we see as the proper standards for practice and research." He further proposed that the *Standards* "are a key piece of helping AHRD achieve the vision of "leading the HRD profession through research." (Holton, 1999).

Version one of the *Standards on Ethics and Integrity* was shared with the academy members at the 1999 AHRD conference held in Arlington, VA through the conference proceedings. Feedback from the membership was obtained at a conference Keynote session. Although the initial standards were intentionally brief and easy to read,

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their application in specific situations may be difficult; thus many of the implicit and necessary ethical dilemmas are left for the individual HRD practitioner, researcher or teacher to resolve.

Currently, no comprehensive guide to a better understanding and application of the *Standards on Ethics and Integrity* exists either for teaching purposes or for use by the individual HRD professional to use in particular ethical situation. Consequently, the authors of the *Standards* are currently putting together an agenda to publish supporting documents, beginning with a casebook. The casebook serves a critical function in insuring the Standards are understood and used by the HRD community of scholars and practitioners. This first initiative is lead by one of the original committee members and a new committee member.

The purpose of the casebook is to present a comprehensive range of contemporary ethical issues in HRD that are integral and unavoidable aspects of the professional role of Academy members. Regardless of one's work setting, practice, research or teaching, ethical dilemmas do arise and action decisions must be made as a result. By providing an awareness of the ethical standards of the profession, and by examining how they apply to specific situations, the authors hope to achieve a useful and practical guide.

The authors operate under the assumption that the book cannot provide solutions to every conceivable ethical problem that might arise in practice, research, or teaching. In fact, some situations may be so complicated that no standards can point the way to a "correct" resolution. In some situations one ethical principle may seem to be pitted against another, or upholding an ethical principle may be at variance with a legal requirement. Moreover, the discipline of HRD is constantly emerging and changing, which causes profound ethical dilemmas that neither the ethics standards nor the profession is fully equipped to handle. We assume, however, that the more information and sensitization to issues made available to HRD professionals, the better they will be able to sort out even the most complex ethical problems and make the best possible professional judgments. We also assume that it is important to have the consensus of the profession in reflecting prescriptive, normative values. Therefore, we believe this Innovative Session will make a substantive contribution to HRD knowledge.

History of AHRD Work on Ethics and Integrity

In a Town Forum at the 1996 Academy of Human Resource Development (AHRD), Victoria Marsick (1996) and Ron Jacobs (1996) discussed whether the Academy should have a code of integrity. Marsick (1997) later published some of her remarks in the Human Resource Development Quarterly. At the next annual meeting of the Academy in 1997, a lunch-time Food-for-Thought session discussed some of the ethical dilemmas facing both researchers and practitioners. A group from that gathering developed a session at the 1998 AHRD meeting to identify some of the issues in the areas of research, practice, and teaching. During this same time period, the Academy sponsored pre-sessions focused on ethics and integrity. From these various sessions and discussions, the AHRD Board along with more and more members became convinced that the Academy should develop a code on ethics and integrity, particularly given the mission of "leading the Human Resource Development Profession through research."

Beginning in the spring of 1998, a taskforce was formed to develop such a code. The taskforce included Janet Z. Burns (Georgia State University), Peter J. Dean (University of Tennessee and The Wharton School of the University of Pennsylvania), Tim Hatcher (University of Louisville), Fred Otte (retired, Georgia State University), and Hallie Preskill (University of New Mexico), with Darlene Russ-Eft (AchieveGlobal, Inc) as committee chair. This group prepared a draft document titled "Academy of Human Resource Development Standards on Ethics and Integrity." This same group then sponsored a Keynote Session at the 1999 Academy conference focused on a discussion and reaction to these Standards. Based on the comments from the AHRD Board and the Keynote Session a final document was prepared and approved by the Board in November 1999. Recognizing that Standards cannot exist with continued refinement and development, the proposed session provides a continuing discussion and dialogue on the issues surrounding a set of standards on ethics and integrity.

Theoretical Framework

The theoretical foundations of this innovative session and the Standards as well are based upon a synthesis of popular ethical theories with the need for case studies as a method to educate HRD professionals and illustrate codes of ethics, which may exemplify such theories. The following discussions focus on (a) ethical theories and (b) case study methodology.

Ethical Theories

To build a true profession and promote professionals who espouse ethical behaviors invariably creates ethical dilemmas. Analyzing ethical dilemmas in some systematic and meaningful way is difficult since ways of viewing ethics from a conceptual perspective are multidimensional. While there is no ubiquitous ethic or universally agreed-upon way to analyze ethics, the two generally acknowledged ways to think about ethics which are currently important to many HRD scholars and practitioners are teleological theories and deontological theories (Dean, 1993; Gellerman, Frankel, & Ladenson, 1990). Teleology, from the Greek telos, meaning 'end' or 'goal', is a consequentialist theory. That is, the moral value of an action or practice is a function of its consequences. Consequentialism significantly underlies much of the ethical thought in regard to development of the standards. Examples of teleological or consequentialist theory are utilitarianism and egoism.

Classical utilitarian theory is the view that we should always choose that which will produce the greatest good for the greatest number. Egoism is the view that an action is moral only when it promotes the long-term interest of the individual. Unlike utilitarianism, egoism restricts pursuit of good to the choosing agent.

In opposition to teleological ethical theories are deontological, or nonconsequentialist views of ethics. The Greek term deon means "duty" or "that which is binding" (Callahan, 1988, p. 19). A deontologist believes that the moral rightness of an action takes precedence over and can be judged independently of the consequences of the action. Results then are not as important as the moral nature of the act in question. One's moral philosophy provides a standard of behavior through adherence to moral rules.

Ethical issues in HRD can be viewed through the teleological/ deontological distinction in ethical theory. When we seek to avoid harm to individuals or the wider society or produce positive consequences through higher productivity or by enhancing employee benefits, we are viewing ethics through a teleological lens. When an HRD professional makes an ethical decision for or against an action or practice based on teleology, they view the action or practice as moral or immoral because of its consequences or lack of consequences in the world. Conversely, deontological reasoning holds that an act or practice should be judged as right or wrong because of some feature intrinsic to the act or practice. In other words, what makes an act or practice morally justifiable is the act or practice itself, not its consequences.

The familiar ethical theories discussed herein provided a theoretical foundation for establishing a code of ethics and for educating HRD professionals and further institutionalizing ethical standards through case studies. Unfortunately, there is no ubiquitous ethic or universally agreed-upon way to analyze ethics, thus, only two generally acknowledged ways in which most people think about ethics were discussed herein. Recognition is given to other unique and divergent ethical points of view such as feminism as ethic, Marxism, and environmental ethics to name but a few. These divergent theories, while meaningful, were not discussed due to the need for brevity.

Case Study Methodology

The use of case study and vignette analysis has a rich history in education, surpassed only by the history of case analysis in cultural ethnography and business (Watson, 1997). In fact, the case study method, used in practice and in teaching, appears as early as the late 1800s. Today the case study approach is used in many fields such as medicine, psychology and ethics. Perhaps the most important purpose the case study can serve in the field of ethics for HRD is that it can provide a context to make decisions in complex ethical situations when there is not an exact match between theory and practice.

Whether the methodology is called case study, case analysis, case incident study or vignette analysis, the structure and purposes have more similarities than differences. Some of the purposes of employing the methodology are to develop skills in reflective and critical thinking, define problems to be solved, discuss relevant data and various sides of the issues, and to verify facts to make judgments. Additionally, Redman (1999) points out that cases actively involve individuals in the learning process because in the design of the methodology, a participant's active responsibility takes the place of passive acceptance.

By design, a case study contains a series of incidents pertaining to a certain situation. In contrast, the case incident study, or vignette is generally less complex and built around a single incident or event and the event is only briefly described. In either instance, the case or vignette is an actual situation or a formulated situation that contains the problem to be addressed. The case is written out and usually includes a short history of the situation, information collected about the situation, and information about the current situation as it now exists. Some shorter cases or vignettes are simply a description of the setting and characters and a brief account of the incident or event.

When used for instructional purposes, cases are reviewed by students and followed with a series of questions. Redman (1999) offers a format for designing cases which includes a case title, subject matter or topic, contextual information, and the story. This particular format also includes questions for reflection. The primary issue embedded in the case is well thought out and secondary issues are included. In general the case study methodology offers flexibility as the questions can be facilitated in a large group discussion, small discussion groups or one can work individually on a case.

The rich complexity of the case method is evidenced by its varied uses. One example appears in the work of Keith-Spiegla and Koocher (1985) who use vignettes for teaching ethics in psychology. The vignettes they use illustrate violations of APA's Ethical Principles as well as other ethical dilemmas which have been adapted either from ethics committees' case files or actual incidents known to the authors. In this work, the authors present the vignette, the area of the APA's Ethical Principles that applies to the situation, and an "answer" to the problem. Another example of the methodology appears in Teaching in Today's Classrooms Cases from Middle and Secondary School (Redman, 1999). In this work, the cases are complex and allow for multiple levels of analysis. According to Redman, (1999) the cases represent current problems that are real and grounded in research. Thirty-two cases, based on different themes, are presented and followed by questions for reflection and additional activities to "extend thinking." The author also invites readers to create additional context for the cases.

Advantages of Using the Case Study as a Companion Piece to the Standards on Ethics and Integrity

The case study methodology has several advantages for the field of HRD relative to the Standards on Ethics and Integrity (1999). First, due to the multidisciplinary nature of HRD, ethical situations are probably much more complex and more multidimensional than they have been depicted in existing theoretical work. The case study approach offers a method for collaborative discussion and problem defining and solving. Additionally, because of the practical application approach, case studies help change agents, teachers, and other HRD practitioners and professionals prepare for problems that are commonly found during the change process or in day to day activities of a profession. Finally, cases can be used to prepare novice and pre-service HRD students for the realities of the profession.

Format of the Innovative Session

A panel of people who wrote the Standards on Ethics and Integrity will lead this 90-minutes session. The panel includes the original committee of Darlene Russ-Eft (Committe Chair), Janet Z. Burns, Peter J. Dean, Tim Hatcher, Fred L.Otte and Hallie Preskill. Steve Aragon, University of Illinois, has joined the committee. The session has two main objectives. First, the session will be a forum to encourage and continue the collegial discussion and dialogue on professional ethics stemming from the keynote session at the 1999 AHRD conference where the Standards on Ethics and Integrity were presented to the membership for the first time. At the same time, the session will focus on a Casebook, which will be the first supporting document to the Standards. The panel will present a case study to Academy members, introduce a format for writing a case study, model and practice writing a case study in a small group, and most importantly, encourage and motivate participants to submit case studies to be included in the casebook.

Introduction of the Session

During the first ten-15 minutes, the theoretical foundation of the session will be explained followed by each panel member briefly reviewing the area of the Standards that he/she worked on, and report on progress since last year's conference. During the next ten minutes, the designated authors will explain the plan for the casebook, providing a high level description.

Body of the Session

A panel member or members will spend about 15 minutes presenting a case and show the various components that we envision having in the casebook. Handouts will be provided for participants. At this point the session will become interactive. The panel, based on participant interest, will identify the standards that the participants are most interested in working on. The panel member(s) who wrote that particular section of the Standards will lead a small group to begin to develop a case in that area. This would be a 30 to 40-minute working session. Small groups could generate ideas for case studies, or actually begin to construct a case study.

Wrap-up of Session

The panel members and entire group will come back together and report to the smaller groups' thoughts and processes. Commitment would be sought on submissions for the book, and timetables would be presented by the main author(s).

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AHRD

2000 CONFERENCE OVERVIEW
Sheraton Imperial Hotel ◆ Raleigh-Durham, NC
March 8 - 12, 2000

Academy of Human Resource Development

Expanding the Horizons of Human Resource Development

Thursday, March 9	Time	Friday, March 10	Saturday, March 11	Sunday, March 12
Preconferences 12:00, Wednesday, March 8, 2000 through 12:00, Thursday, March 9, 2000	7:00 AM to 8:15 AM	Food-N-Thought Discussions (3), Join in! → HRDI Management Board Breakfast and Meeting *EXHIBITORS OPEN*	Food-N-Thought Discussions (3), Join in! → HRDI Editorial Board Breakfast and Meeting	Food-N-Thought Discussions (3), Join in! → AHRD Board Breakfast
⊃ IFAL- Action Learning ⊃ Performance in HRD ⊃ Integrity in HRD ⊃ Globalization in HRD ⊃ Emerging Scholars and Leadership in HRD	8:30 AM to 10:00 AM	***--Keynote Presentation*** **Dr. Peter B. Vaill** **University of St. Thomas** **"Leading and Managing Change is All There Is."**	***--Keynote Presentation*** **Dr. John C. Boling** **SAS Institute, Inc.** **"Learning, Unlearning, Relearning"**	**SYMPOSIUM** 37. Workforce Development 38. Advances in Distance Learning 39. Integrating Learning and Working 40. Research Methods in HRD I6. Innovative Session - Action Learning J1. Publishing in HRD RF4. Research Forum 4
Conference **Registration** **Opens**	10:30 AM to 12:00	**SYMPOSIUM** 1. Using Technology for Learning 2. Linking HRD Theory and Practice 3. Motivation for Learning and Performance 4. Images of HRD 5. Assessing University Programs 6. New Perspectives in Evaluation I1. Innovative Session - Informal Learning	**SYMPOSIUM** 19. Increasing Participation in Learning 20. Emotion and Behavior in Workplace 21. Action Learning 22. Increasing Job Satisfaction 23. Designing Effective HRD Programs 24. Organizational Culture and Climate I4. Innovative Session - Values and Ethics P1. Poster Session	**SYMPOSIUM** 41. Organizations in Transition 42. HRD and Employee Outcomes 43. Change and the Consultant 44. Individual Learning Issues I7. Innovative Session - Theory Building
12:00-5:00 AHRD Board of Directors Meeting 2:00-5:00 Local Tours	12:00 to 1:30 PM	Food-N-Thought Discussions (3) - Join in!	Food-N-Thought Discussions (3) - Join in! → Joint AHRD Board and ASTD Research Committee Meeting and Lunch → Advances Editorial Board Meeting and Lunch	AHRD Business Meeting for all Academy members
3:00pm Academic Showcase hosted by North Carolina State University 5:00pm Student Reception 6:00pm Grand Reception & Conference Overview	1:30 PM to 3:00 PM	**SYMPOSIUM** 7. Identity, Influence and Politics 8. Charting the Future of HRD 9. Workplace Issues 10. Assessing the Learning Organization 11. Organizational Change 12. Leadership Development I2. Innovative Session - Knowledge Working Paradigm S1. Special Session - Asian Chapter	**SYMPOSIUM** 25. Developing Employee Competence 26. Self-Directed and Incidental Learning 27. Ethics and Integrity 28. Feedback Systems 29. Cross-Cultural issues in HRD 30. Organizational Structure and Strategy I5. Innovative Session - HRD and Metaphor RF2. Research Forum 2	Lunch and hotel checkout
7:00pm HRD Town Forum **Social Responsibility of HRD How Our Definitions and Worldviews Impact Our Leadership Role** Ann K. Brooks Timothy G. Hatcher	3:30 PM to 5:00 PM	SYMPOSIUM 13. Knowledge and Intellectual Capital 14. Workforce Diversity 15. Management Development 16. Improving HRD Practice Through Research 17. Transformative Learning 18. Instructional Technology I3. Innovative Session - Use of Internet in HRD RF1. Research Forum 1	**SYMPOSIUM** 31. Evaluation in HRD 32. Core Directions in HRD 33. Work Motivation 34. Career Development 35. HRD in Asia 36. Knowledge Management S2. Special Session - Publication Reviewers RF3. Research Forum 3	
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Human Resource and Organization Development Program Brochures: What Prospective Students Want

Rose Opengart
University of Georgia

Mary Wilson Callahan
WORK IN PROGRESS

Current students in the field of Human Resource and Organization Development analyzed marketing materials from eight graduate programs. Analysis was grounded in the fundamental elements of the marketing mix, including people, product, price, place, and promotion. Students examined brochures and made suggestions regarding effectiveness of presentation, content, and ability to attract students such as themselves. Recommendations for brochure effectiveness are presented in Poster 2.

Keywords: Marketing, Brochure, Graduate programs

The purpose of this study is to examine promotional materials of graduate programs in the field of Human Resource and Organization Development (HROD). The brochures will be analyzed for their effectiveness in describing a particular program and subsequent ability to attract students. Analysis of program brochures using a marketing perspective serves to determine marketing strategies, identify underlying philosophies and assumptions, and characterize the programs, their intended markets, and the products and services offered. Key themes emerging from assessments by various audiences is presented.

Marketing is an important business strategy and is applicable to many arenas. The need for marketing developed as the productive capacity of the United States began to exceed the immediate needs of society. The marketing manager must utilize and direct this excess productive capacity into channels people desire. This requires organizations to be consumer oriented and take direction from the marketplace. (Buskirk, 1970). This concept is as important to production oriented organizations as to those that provide service and education. A university is in competition with many others, and can use marketing strategy to its advantage. The use of the four P's (Product, Price, Place, and Promotion), enables an organization to gain a strategic advantage. Taken together, the P's constitute a mix often referred to as the marketing mix. The mix is the combination of marketing tools that a marketing manager attempts to arrange and control in order to create exchanges with target market members (Sandhusen, 1993). The idea is to come up with a mix that will clearly differentiate your product from those of your competitors in order to attract the desired consumers, or in this case, students.

This analysis is grounded in the fundamental elements of the marketing mix, in other words, the four P's. In this study, a fifth P was added to include the People dimension. For purposes of this study, these terms and their applications to HROD program brochures are defined below in Table 1.

Method

The researchers have gathered brochures from leading graduate programs in HRD, HROD, and OD. These eight schools were selected as a result of the recommendation by the Director of HROD programs at the University with which the authors are affiliated. These eight schools include: Benedictine University, Case Western University, Columbia University, University of Minnesota, University of Nebraska, University of Texas at Austin, Vanderbilt University, and Xavier University. The researchers performed the first level of analysis, that (1) examined each brochure along the five dimensions described above and (2) assessed the effectiveness of each brochure in terms of clarity, comprehensiveness, and persuasiveness.

The second step involved the presentation of the brochures to students attending classes in HROD. The students were given the definitions and applications of the five P's as presented above and asked to perform an

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examination and assessment along the same lines as the first level analysis. They were asked to analyze the brochures as well as provide opinions regarding effectiveness of materials, expectations raised by the materials, additional information and needs, etc. Their comments were gathered and analyzed (using qualitative content analysis) for key themes that emerged.

One limitation of the study was that classes were not in session prior to manuscript submission. Therefore, a modified sample was necessary. Three students in addition to the authors evaluated the brochures using the method described above. The resulting summary analysis is presented. The analysis at the conference will therefore be considerably more extensive and might differ somewhat from the initial analysis presented.

In the third level of analysis, the full set of information is summarized. This information contains the summary analysis and those elements that students stated as attractive and necessary features of program brochures. The posters displayed at the AHRD conference feature the HROD program brochures, highlighting how, on the whole, they address (or fail to address) the five P's. Additionally, key themes are summarized and presented. Specific examples of student critique and key themes in the brochures are highlighted. The figures presented below are miniature models of the posters and the summary analyses.

Table 1. Marketing Mix defined

Dimension	Definition	Application
People	The interests, needs, priorities, and resources of the stakeholders in the economic transaction, including your own organization, customers/clients, suppliers, competitors, regulators, and opinion leaders	Examine information regarding the faculty, staff, students, and alumni and their qualifications, diversity, interests and experience.
Product	The issues surrounding the development of the product or service. Major concerns are identification of need in the marketplace and appropriate response to the identified need.	Examine the details of the program offering. This could include the department in which the program is located, the curriculum, availability and frequency of courses, reputation of institution, and anything unique to the particular program.
Price	Finds where market demand, typically expressed as dollars, and the cost of producing the product or service come together and determines the profitability or lack of it. Competitive positioning keeps pricing from being a simple matter.	Determine the equitability of the cost of the program and the overall value. Determine availability of graduate assistantships.
Place	The task of getting the goods to market and/or delivering the service. Distribution is more descriptive of the task, but it is not so conveniently memorable as place.	Analyze the brochure for the quantity, depth, and quality of the description of the location of the university. Determine availability of distance learning and satellite locations.
Promotion	All of the methods of communicating the product offering to the target market.	Analyze general appearance, presentation, and promotional style. Look for evidence of alternative ways of promoting the program.

Significance

It is important to understand marketplace needs in order to develop marketing mixes to satisfy these needs. Conducting this analysis using current HROD students is likely to generate information and needs representative of the target market of students. Therefore, acquiring the perspectives and opinions of current graduate HROD students regarding program brochures serves several purposes. First, it provides information about what features and presentations are attractive to the target market. Second, it will elicit information regarding exactly what prospective students need and want from a brochure. Presenting this information within the marketing framework of the five P's provides the opportunity for conference attendees to determine exactly what is necessary for their own program brochures.

Findings and Recommendations

Students provided the researchers with feedback and suggestions. This included highlighting those program materials that were perceived as positive examples as well as proposing methods for improving upon them. All marketing materials received from schools will be on display at the conference. Brochures and features demonstrating suggestions made by students will be presented. For specific recommendations, refer to Poster number 2.

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Poster 1
Display of brochures

Benedictine University
Case Western University
Columbia University
University of Minnesota
University of Nebraska
University of Texas at Austin
Vanderbilt University
Xavier University

Poster 2
What Students Want from HROD Program Brochures

People:	Include abundant information on faculty and students
	Represent diversity across ethnic groups
	Describe faculty interests and perspectives
Product:	List specific courses available
	Provide schedule of classes
	Provide specific information on what faculty has to offer students
	Demonstrate a variety of courses including both HRD and OD
Price:	Indicate the availability of graduate assistantships
	Present specific fee information
	Provide information regarding all financial support for students
Place:	Provide information on location of the university
	Indicate competitiveness of the program
Promotion:	Offer clear, concise and easy to read material
	Provide only program relevant material
	Use only current, up-to-date pictures and information
	Provide a page of frequently asked questions
	Organize materials/ include a table of contents
	Present an attractive and professional image - no photocopied pages or inserts
	Use colors effectively

Web-Assisted Foreign Study Model

James J. Kirk
Western Carolina University

This poster depicts a foreign study instructional delivery model that combines on-line marketing and delivery of international instruction with on-site visits in a foreign country. Various elements of the model are clustered into five delivery stages including; marketing, advance organizing, information gathering, information processing, and evaluation. Key elements of the model include; course materials (i.e., syllabi, assignments, resource links), an on-line orientation, on-line checklist, selected on and off-line readings, student questions and final exam, site visits, on-line and on-site discussion groups, and site visit reports.

This poster depicts a foreign study instructional delivery model that combines on-line marketing and delivery of international instruction with on-site visits in a foreign country. Various elements of the model are clustered into five delivery phases including; marketing, advance organizing, information gathering, information processing, and evaluation. Key elements of the model include; course materials (i.e., syllabi, assignments, resource links), an on-line orientation, on-line checklist, selected on and off-line readings, student questions and final exam, site visits, on-line and on-site discussion groups, and site visit reports.

Two recent phenomena have made the delivery of web-assisted foreign study both desirable and possible. They include the global economy (Jones, 1998; Smith, 1998) and the development of the World-Wide-Web (Moss & Townsend, 1997; Thornberry, 1998). The global economy ties the business interests, practices, and survival of US companies to markets in Europe, Asia, and Latin America. The advent of the World-Wide-Web makes it possible to communicate, do business, and teach individuals around the globe.

The Model

The following poster diagram depicts the five phases of the Web-Assisted Foreign Study Model. Elements of the model include Marketing, Advance Organizing, Information Gathering, Information Processing, and Evaluation. Each phase involves the use of the web to perform key functions. The term "phase" is used to indicate that it is not absolutely necessary to complete one step of the model prior to beginning the next step. The Marketing Phase involves contacting and getting promotional materials in the hands of potential students. Unless sufficient numbers of qualified participants can be recruited for a given course, the course may have to be canceled. The Advance Organizing stage involves helping students to get organized for travel abroad, gain an understanding of the course structure, and gain sufficient subject matter information to enable participants to engage in active learning activities when they arrive on-site in a foreign country. The Information Gathering and Information Process Phases involve gathering and gaining an in-depth understanding of the subject matter content. In practice these two phases overlap. However, the bulk of the Information Gathering Phase takes place abroad, whereas, the Information Processing Phase takes place after students have returned to the United States and have sufficient time to reflect upon their international experience. The Evaluation Phase involves assessing the knowledge and understanding students gained from their foreign study experience and getting feedback from students on the Web-Assisted Foreign Study Model. This information can be used by an instructor to make improvements in the Model.

Marketing

The added cost of travel, hotel, and meals makes foreign study courses more expensive than traditional classroom instruction. These added expenses often make it impossible for some students in a given academic program to participate in such educational offerings. Hence, instructors may need to market foreign study courses outside their own departments or universities. Otherwise, there may be an insufficient number of students to make the foreign study travel financially viable. Unfortunately the preparation, printing, and mailing of marketing materials outside the host department can be rather costly. Costs may further increase when multiple mailings of promotional materials are needed and when the materials contain color pictures of the places to be visited.

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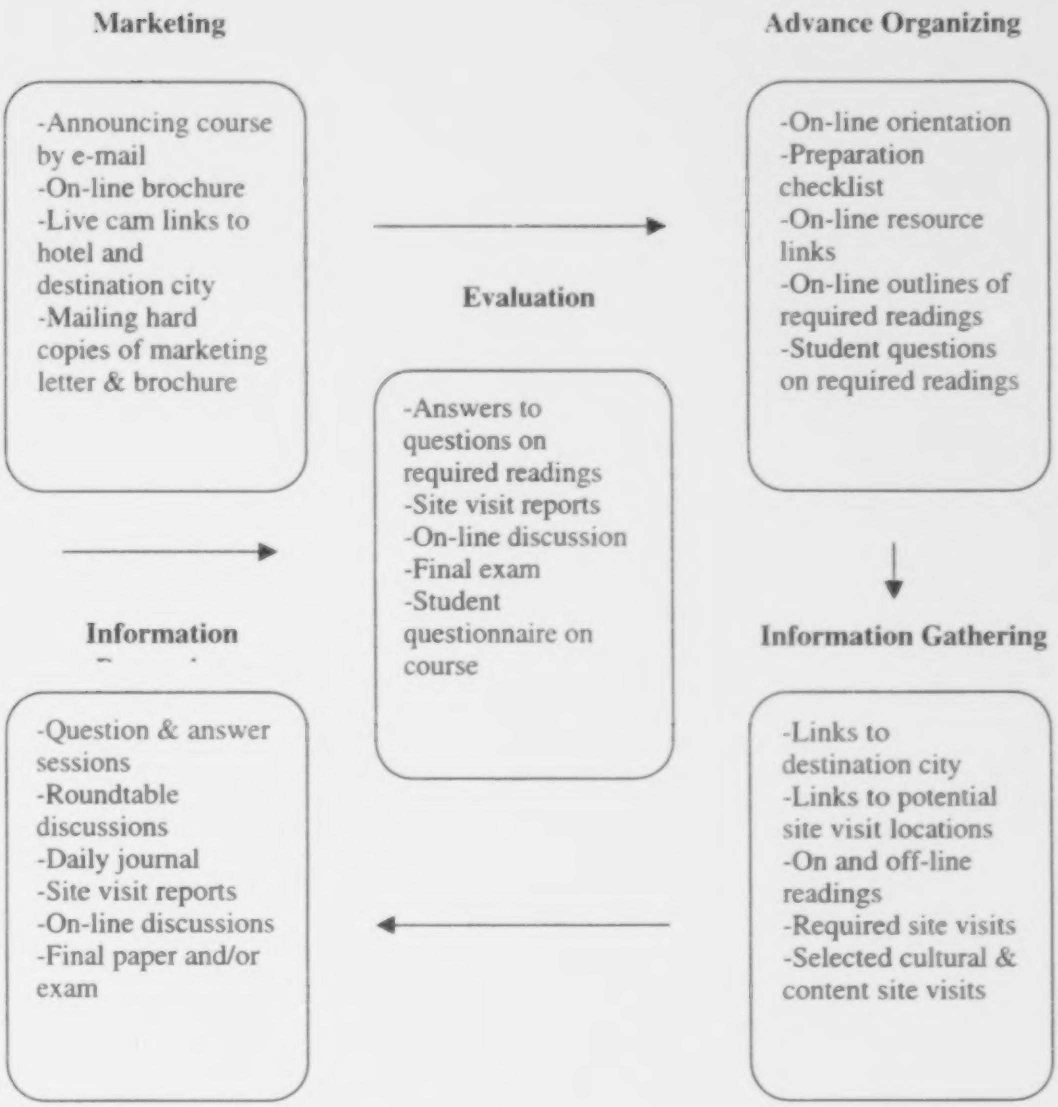
Web-Assisted Foreign Study Model


Marketing
-Announcing course by e-mail
-On-line brochure
-Live cam links to hotel and destination city
-Mailing hard copies of marketing letter & brochure
Advance Organizing
-On-line orientation
-Preparation checklist
-On-line resource links
-On-line outlines of required readings
-Student questions on required readings
Evaluation
-Answers to questions on required readings
-Site visit reports
-On-line discussion
-Final exam
-Student questionnaire on course
Information Gathering
-Links to destination city
-Links to potential site visit locations
-On and off-line readings
-Required site visits
-Selected cultural & content site visits
Information
-Question & answer sessions
-Roundtable discussions
-Daily journal
-Site visit reports
-On-line discussions
-Final paper and/or exam

The web can be a particularly useful and inexpensive marketing tool (Canzer, 1997). The Web-Assisted Foreign Study Model can help instructors overcome some of the marketing obstacles they may have encountered in the past. By e-mailing prospective students letters and brochures, one can greatly reduce printing and mailing costs. It is also possible to distribute greater amounts of information to larger numbers of individuals without an additional expense. Furthermore, e-mailing can be made more effective with the possibility of multiple mailings. Not only can pictures be included in the electronic mailings but links to live web cams can be included as well. Hence, prospective students can take a virtual tour of the hotel in which they will be staying or sites they will be visiting. They may even be able to download sound bites and short video clips. Such options may be helpful in influencing prospective students to sign up for a foreign study course. The end result is that more effective marketing materials can be sent more times to more individuals. If such mailings are directed toward a carefully selected audience, it can increase the number of students enrolled in a particular class. However, instructors should also be prepared to send out a selected number of course announcements and brochures the old fashioned way—snail mail. Not all prospective students can be reached via the web. Hard copies can also reinforce materials sent out electronically.

Advance Organizing

The second phase of the Web-Assisted Foreign Study Model is Advance Organizing. Generally speaking, advance organizers have been shown to facilitate learning across a variety of subjects (Lawton & Wanska, 1978: Lawton, 1979; Lenz, 1983; Mayer, 1979). Prior to engaging in a foreign study experience, students need to orient themselves to the course structure, the country being visited, and the subject matter of the course. Such cognitive and logistical organizing can be greatly enhanced by the web. For example, an on-line orientation can present information about securing a passport, baggage and special meal arrangements of the airlines being flown, time zone changes, weather conditions, money exchange rates, and cultural customs of the country being visited. An on-line checklist can help participants prepare for an international excursion in an orderly manner. Selected links can provide students background information, pictures, and maps showing the locations of places they will be visiting. Finally, on-line readings in a given subject matter can provide students the necessary background information to understand and discuss what they see while in another country. Advance on-line organizers can be used as the sole means of preparing students to study abroad or they can be a useful supplement to on-site orientation meetings and printed materials.

Information Gathering

The aim of any course is to help students gain information and understanding of a particular subject. With regard to foreign study courses, an added learning dimension is present. Learners are expected to gain an understanding of the culture in which the subject matter is to be learned or to which the subject matter pertains. For example, if students are going to the United Kingdom to learn about human resource management practices, they must also learn about British Society. This would include work systems, the law as it pertains to hiring and firing employees, health insurance, and private/government supported retirement systems.

The World-Wide-Web has been shown to be an effective tool for the gathering of information (Ashley, 1992; Ryder & graves, 1996). In the Information Gathering Phase students can access links to a variety of course related information. For example, they can listen to radio broadcasts over the web as well browse online newspaper, magazine, and library articles in the country to be visited. They can also access and read required on-line readings. Such readings can supplement other assigned reading from textbooks. Students can also access information about places they will be required to visit as well as places they will have the option to visit. Such information is often more current than what appears in print. It can be referred to after a site visit has been made to fill in information gaps that were not closed during the actual visit. E-mail links at such sites also afford students the opportunity to submit a question that they didn't think of during a site visit or have some point of confusion clarified. In addition, e-mail links to places visited provide students an affordable means of thanking their hosts for their time and expertise.

Information Processing

As most educators recognize, information is not knowledge or understanding. Knowledge and understanding comes with processing the newly acquired information (Boster & Hunter 91; Johnstone & Sleet, 1994; Parker, 1993). Processing new information often involves organizing/reorganizing the new information, interpreting the new information, integrating the new information into what is already known about the subject, applying the new information, and reflecting upon the information and it usage. Such processing can be facilitated by question and answer sessions during site visits and roundtable discussions among small groups of students at meal times. Once students have returned to the States, additional processing of the newly acquired information can take place through required participation in on-line discussions. Site visit reports, journals, final papers, and final exams that require students to concretely apply their newly acquired information can also help students increase their understanding of what they have learned.

Evaluation

Course evaluations typically involve assessing the results of an educational experience and making a judgment as to the worth of the outcomes. Such value judgments are then used to make program design and delivery decisions. An instructor may choose to discontinue a course or continue the course with some/no changes. Changes in the course are usually made with the intention of improving the results being measured. Measured results often involve student learning and student satisfaction with the learning experience (Rolph & Rolph, 1989).

The Web-assisted Foreign Study Model attempts to assess student knowledge at various points during the foreign study experience. Prior to going abroad the instructor posts questions covering the required readings. Answers to the questions provide an instructor some indication of how prepared students are to engage in meaningful and informed discussion once they arrive in the country in which they will be studying. Upon returning to the States, students participate in selected learning activities that provide the instructor additional information on the amount, accuracy, and depth of learning that has taken place. These include site visit reports, participation in on-line discussions, and a final paper or exam. Instructions for the site visit reports and group discussions are given on-line. Once completed, site visit reports are e-mailed to the instructor. The instructor evaluates all assignments and returns them to participants via e-mail. The instructor also actively participates in the on-line discussions. To assess student satisfaction with the course, a questionnaire is e-mailed to all participants. Students e-mail back to the instructor completed questionnaires. The results of the questionnaire are analyzed and used to revise the Web-assisted Foreign Study Model.

Conclusions

The global economy and the World-Wide-Web have made the delivery of web-assisted foreign study both desirable and possible. This poster session depicts a foreign study instructional delivery model that combines on-line marketing and delivery of international instruction with on-site visits in a foreign country. The model consists of five delivery phases including; marketing, advance organizing, information gathering, information processing, and evaluation. Key elements of the model include; course materials (i.e., syllabi, assignments, resource links), an on-line orientation, on-line checklist, selected on and off-line readings, student questions and final exam, site visits, on-line and on-site discussion groups, and site visit reports. The model can be easily adapted to a variety to subject matter content.

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Creating the Global Learning Organization (GLO)

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Creating the Global Learning Organization (GLO) is an action research model to assist U.S.-based corporations in creating an organizational culture that is globally inclusive in theory and practice at all levels. It is based on the principles of Organization Development (OD) (including learning organizations), Human Resource Management, and change theory to move the corporation from an ethnocentric a geocentric corporate world view in all its business and people practices, policies, procedures, and technologies

Keywords: Globalization, International HRD, Organization Development.

With the fast-paced global changes facing the corporate sector and increased competition in the marketplace, globalization and diversity issues are ever more crucial to the survival and success of business organizations. Many U.S. businesses are just beginning to understand the importance of these global challenges. However, few have truly embraced globalization to the extent of creating a corporate-wide culture that is globally inclusive in practice and theory at all levels.

Problem Statement

Only 43% of service companies responding to a survey conducted by A.T. Kearney Executive Search indicated that they have a formal globalization/diversity process in place, while 32% indicated that they had no immediate plans to initiate such a process (Jarvis, 1997). The roots of corporate culture are so deeply embedded in many U.S.-based companies that promoting change on global issues is difficult and often resented or challenged by well-meaning employees.

The business research question is, How does a U S.-based business create an organizational culture that is globally inclusive in theory and practice at all levels? One of the greatest challenges for U.S. transnational corporations is shifting a long-time corporate paradigm from an ethnocentric worldview to a geocentric one (Heenan & Perlmutter, 1979) (see Figure 1).

Global Learning Organization

The Global Learning Organization (GLO) is a result of a proactive process used to transform corporate culture at all levels to a geocentric and globally-inclusive organization. This process and initiative address critical global diversity and change issues meant to attract and retain the best employees; gain a marketing advantage through enhancing customer service, innovation, and awareness of global and domestic diversity issues; increase employee creativity, quality, teamwork, and innovation; reduce costs associated with marginalization of employees and lower productivity; and obtain buy-in at all levels for corporate global diversity and change efforts.

The first step in this transformation process is creating in the workforce an understanding of the need for change (Bennis, Benne, & Chin, 1985). This buy-in to the need to change must be based upon the

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concept of learner readiness while instilling in all functions and levels of the organization the pressing and strategic need to create new cultural roots and a globally-conscious mindset.

An attitudinal change typically precedes actual organizational change. A positive diversity-related attitude must be present prior to a behavior change because it demonstrates an individual's degree of readiness to behave in a certain manner toward co-workers or customers who are different (Henderson, 1994). Efforts to bring about real change without employee input and buy-in, however, can and often do result in strong resistance. Providing employees with the opportunity for input facilitates the attitudinal change that is the foundation for a geocentric focus.

Resistance is also minimized when the change process utilizes the principles of Organization Development (OD) (Burke, 1982; Rothwell, Sullivan, & McLean, 1995), Human Resource Management (HRM), and the Learning Organization (Kline & Saunders, 1993). The GLO model proposed in this paper should assist businesses in creating and sustaining structures, practices, policies, and values that will imbue the concepts of globalization and multiculturalism throughout the organization. It will also engage the business in a strategic planning process in creating and maintaining a globally-inclusive organizational culture (O'Hara-Devereaux & Johansen, 1994; Rhinesmith, 1993; Trompenaars, 1993).

While the model is intended to be general in scope, it is also designed to be modified for specific application to an individual business. Its focus is on process and the art of becoming. A systems approach with synergistic benefits is intended to tailor the model to needs of specific companies and even within different operations in different countries and cultures. No single OD intervention is intended. Rather, the model focuses on a strategic process that encompasses multiple interventions that may change over time as additional issues and problems emerge. Likewise, the model's attempt to create a geocentric organizational culture is not meant to fit each specific difference of the various cultural dimensions of different countries. The phrase, "think globally, act locally," is apt (Kanter, 1995). Each company must determine on a continuum what its desired business activity should be and adapt the model to its business plan (see Figure 2).

The concept of the learning organization was popularized by Senge (1990). Nevis, DeBella, and Gould (1995) described the learning organization as "an organization that has woven a continuous and enhanced capacity to learn, adapt and change into its culture. Its values, policies, practices, systems and structures support and accelerate learning for all employees" (p. 73). A long list of the characteristics of a learning organization are shown in Marquardt and Reynolds (1994), and includes, among others:

> ...Embraces change; encourages managers to be coaches, mentors, and facilitators of learning; has a culture of feedback and disclosure; has a holistic, systematic view of the organization and its systems, processes, and relationships; has shared organizationwide vision, purpose, and values; ...has systems for sharing learning and using it in the business; ...provides frequent opportunities to learn from experience; ...spreads trust throughout the organization; strives for continuous improvement; ...views the unexpected as an opportunity to learn. (p. 23)

These are the conditions that are essential for a global learning organization, as well as a domestic one. The assumption of the model is that the cyclical, continuous improvement principles of learning organizations, consistent with the values of the Action Research Model of Organization Development, are critical for the long-term success of an organization that is seeking to be global.

It is important to view the model presented here as a process model, not a blueprint for the creation of a geocentric organization. Use of the *process* outlined in the model will help each organization create its own blueprint; one that is fully customized to its specific needs. While no two blueprints will be identical, at the heart of each will be an organization that is truly globally inclusive. At its most basic, the model is intended to change the roots of organizational culture by affecting the very heart and emotional core of the corporation and its people. By placing emphasis on process and the affective dimensions of organizational culture, the model produces a transformation of the existing culture. It does require that the organization accept thought processes and paradigms that are consistent with Organization Development.

Model Description

The full model, displayed in Figures 3 and 4, targets the current organizational culture, including all systems, such as HR practices, business strategies, technology functions, marketing strategies, and R&D practices, and all employees. As all are targets of the change, all can also be agents of change.

Implementing culture change is an on-going process guided by strategies that are flexible and holistic that allow leadership to factor in external and internal dynamics that affect the marketplace and the business. This process approach may appear to be too amorphous for many bottom-line managers but, when founded securely upon sound theories and principles can provide a framework to allay such fears.

The following are tenets within which the globally inclusive GLO change process is conducted: *Create change buy-in and enrolment at all levels; Provide effective leadership modeling and articulation of global vision; Conduct culture audit, qualitative and quantitative, for designing OD interventions; Create ownership of OD change interventions at all levels and functions; Provide extensive team-building and empowerment opportunities; Focus on personal and organizational work at the cognitive, affective, and behavioral levels; Design training and education processes around learner readiness; Build accountabilities for globalization into employee and executive performance; Link globalization efforts with all other corporate initiatives; Provide measurement for progress around OD change efforts;* and *Provide challenge and support for all employees.*

These tenets should be considered when implementing the GLO model. Implementation of concepts is dependent on the specific organization and a number of variables including: leadership commitment, other corporate initiatives in place, the level of globalization achieved to date, the organization's track record around diversity/globalization work, economic considerations, and organizational resources.

Implications for Human Resource Development

The OD and training implications of the GLO model have already been articulated in part. In addition, management development is key to the success of the GLO. To develop the competencies outlined, managers will need to have significant, perhaps life-changing, events. They need positive international and cross-cultural experiences, including worldwide travel. Executive and management coaches may help organizational leaders to develop, articulate, and implement the core tenets necessary for a GLO. Assignments to other parts of the world can be extremely beneficial, but only if the assignment is planful, the manager has an opportunity to reflect on the experience with others, and the organization plans for meaningful and productive repatriation. As specified in the tenets, however, the responsibility for globalization does not lie solely on the managers. Employees need similar positive experiences with international and cross-cultural situations.

Learning to work in cross-cultural, and often virtual, teams is also critical. Such training will include learning what makes teams more effective as well as team building. Modeling of appropriate team facilitation will be essential, and most teams will also require coaching, as team members develop appropriate team behaviors and learn team-based roles. Cross-cultural conflict management skills will also be needed and must be developed.

Some employees will have the opportunity for assignment in other parts of the world. HRD, and management, must take these assignments more seriously than has typically been the case. Employees and their families will need extensive pre-departure preparation, on-site support, and meaningful repatriation, including utilization of the newly developed globalization understandings and skills.

A culture of continuous improvement must exist for the transformation to move smoothly and for employees to feel that they have the freedom to suggest needed improvements in the globalization process and that they will be rewarded for such behavior. HRD will also need to teach both feedback seeking and feedback receiving skills among all employees. Communication skills, particularly within cross-cultural settings, will need to be developed.

The Research Task

As with any model, the research task addresses the validity, appropriateness, completeness, and practicality of implementing the model. Among other approaches that could be used, one approach would be the use of action research within an organizational case study (or multiple case studies) context. Specifically, the questions that need to be addressed by an organization that is attempting to develop a GLO are: What are the major problems encountered in attempting to implement the model? What are the barriers within the organization's culture that hinder implementation? What modifications are needed in the model (additions, omissions and changes)? Does the model work in certain types of organizations better than others, e.g., structure, size, industry, locations, pre-existing culture? Is it possible to change an organization that is ethnocentric to one that is geocentric or one that does not affirm globalization to one that does? What are the factors present within the culture that support these changes if they do occur?

Obviously, this is not a complete list of questions to be explored, nor will it be possible to answer all (or even many) of these questions through one research study. However, using the action research approach in combination with organizational case studies will allow insights related to these questions (and more) over a period of time. It will take a concerted research focus on behalf of those charged with implementing the changes to add to the theory and knowledge about the usefulness of this model and the many theoretical constructs that serve as its foundation.

Summary

The ultimate goal of any global OD change process is to infuse all members of an organization with such respect for globalization that an organizational culture is created in which all elements of diversity exist and are expressed in a natural and sustaining process. In effect, the process becomes second nature to the organization, and overt OD Global interventions are constantly being requested and implemented at all levels of the organization. The organization will have become a Global Learning Organization (GLO).

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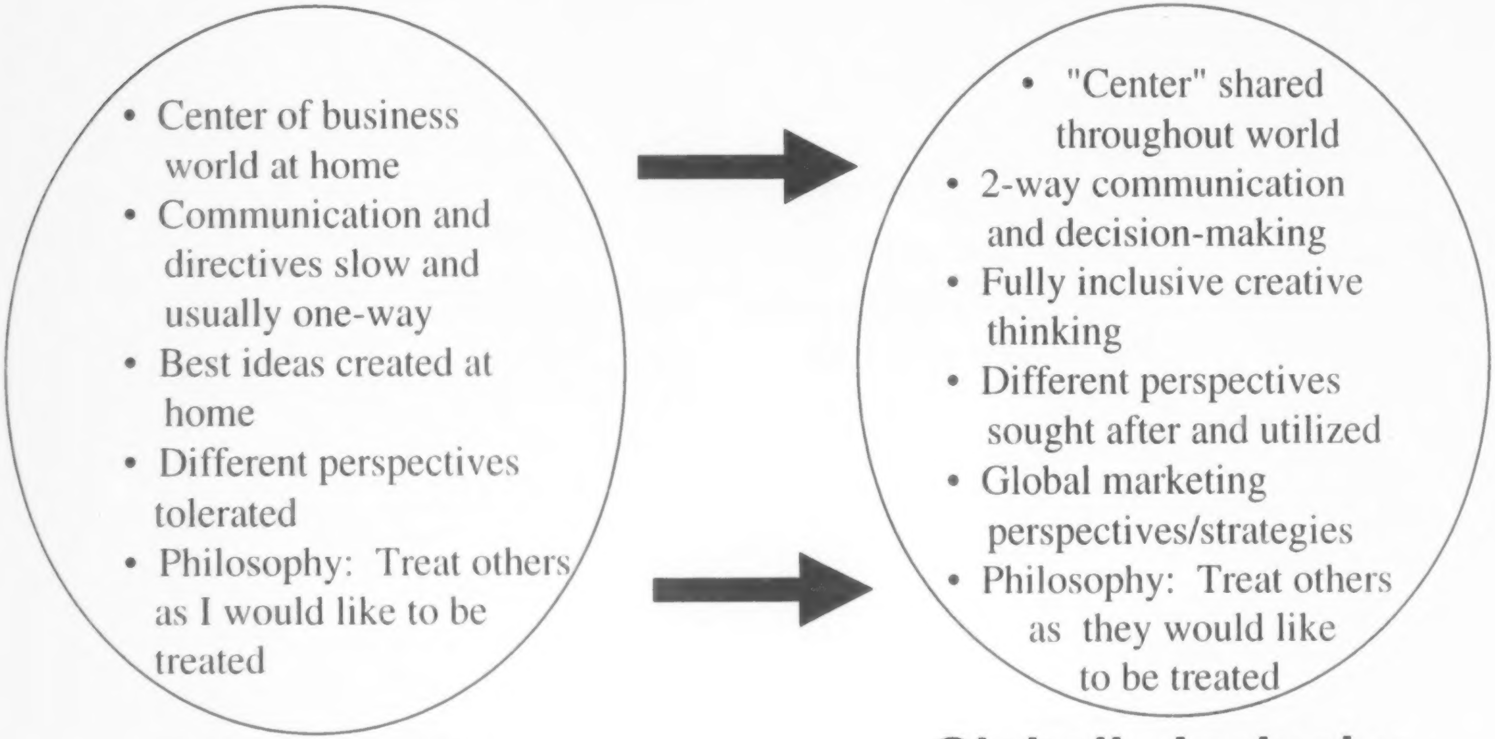
Figure 1
Corporate World View



- Center of business world at home
- Communication and directives slow and usually one-way
- Best ideas created at home
- Different perspectives tolerated
- Philosophy: Treat others as I would like to be treated

Ethnocentric

- "Center" shared throughout world
- 2-way communication and decision-making
- Fully inclusive creative thinking
- Different perspectives sought after and utilized
- Global marketing perspectives/strategies
- Philosophy: Treat others as they would like to be treated

Globally Inclusive

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Figure 2
International Business Activity Levels

Lowest → Highest

- Domestic Business
- Internat'l Business
- Multinat'l Business
- Global Business

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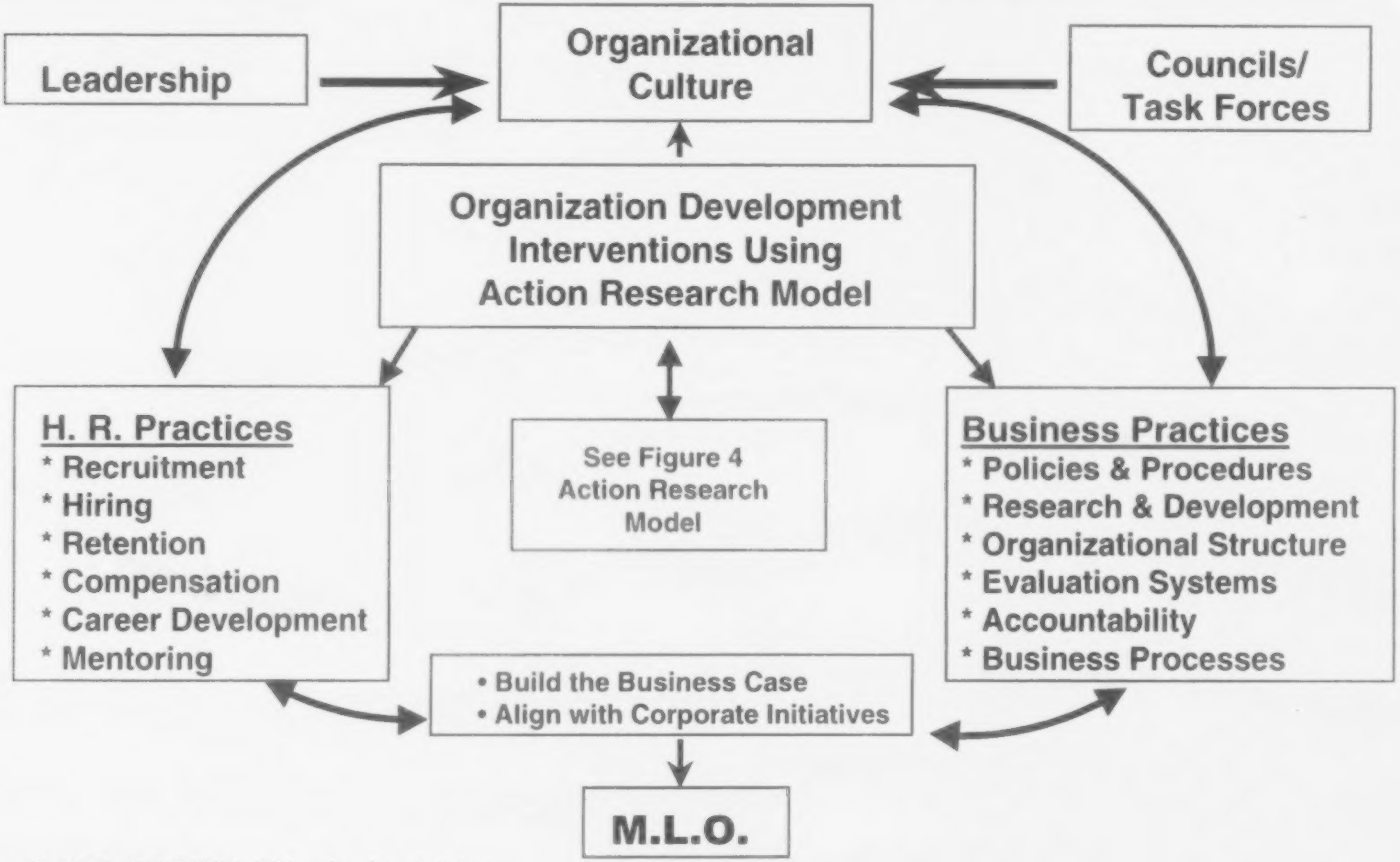
Figure 3 - Global Learning Organization (GLO) Model



Leadership

Organizational Culture

Councils/ Task Forces

Organization Development Interventions Using Action Research Model

H. R. Practices

- * Recruitment
- * Hiring
- * Retention
- * Compensation
- * Career Development
- * Mentoring

See Figure 4 Action Research Model

Business Practices

- * Policies & Procedures
- * Research & Development
- * Organizational Structure
- * Evaluation Systems
- * Accountability
- * Business Processes

- Build the Business Case
- Align with Corporate Initiatives

M.L.O.

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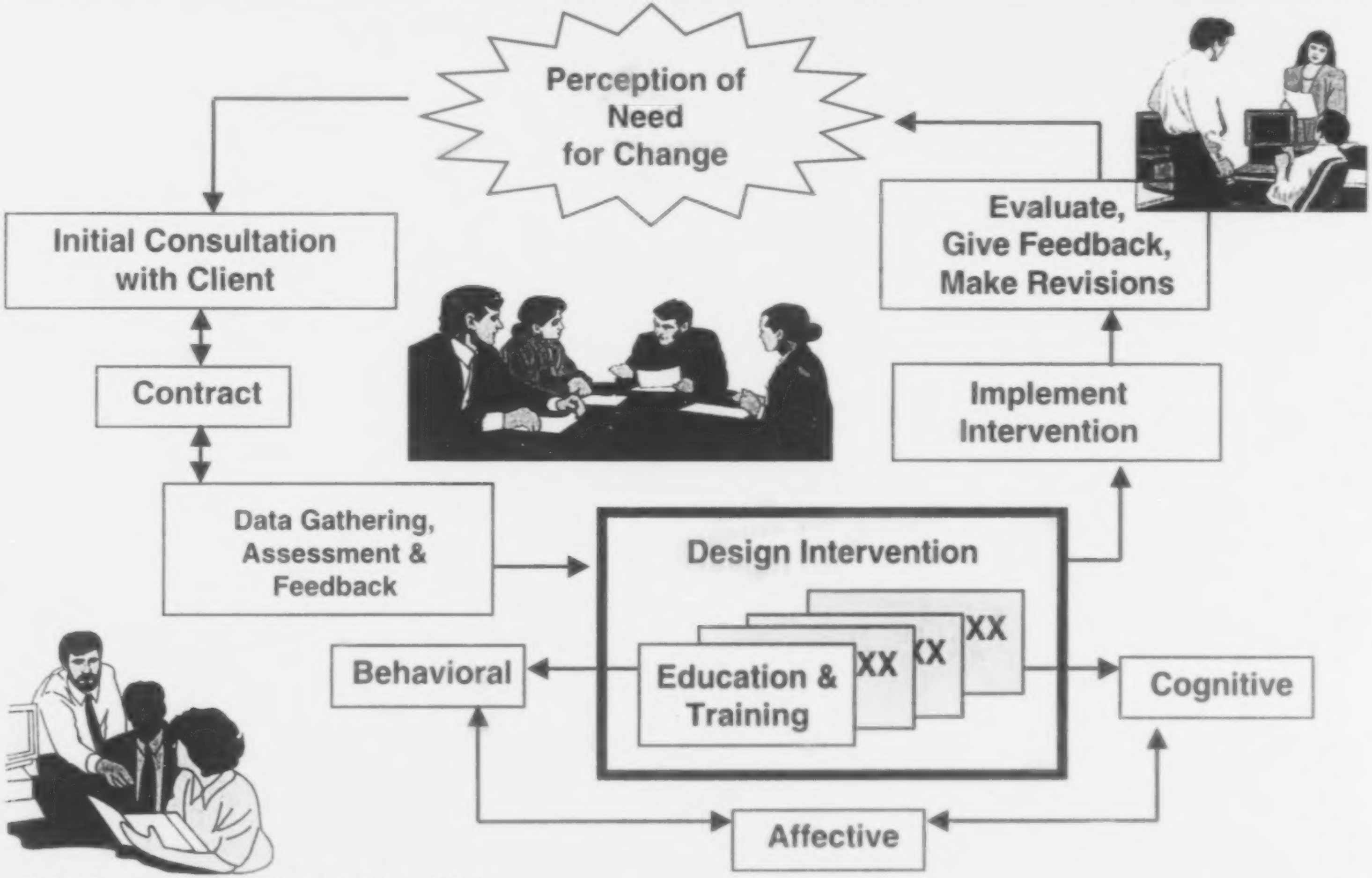
Figure 4 - Organization Development Toward Creating the G.L.O.



Perception of Need for Change

Initial Consultation with Client

Contract

Data Gathering, Assessment & Feedback

Design Intervention

Education & Training

XX

XX

XX

Behavioral

Cognitive

Affective

Implement Intervention

Evaluate, Give Feedback, Make Revisions

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Organizational Alignment Theory Updated: Poster Presentation

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The article presents an overview of Semler's theory of organizational alignment, how and why it works, several theoretical propositions, a conceptual and diagnostic alignment model, and implications for practice. It accompanies the poster presentation.

Keywords: Organizational Alignment, Organizational Performance, Strategic HRD

Webster's dictionary defines alignment as "the proper positioning or state of adjustment of parts in relation to one another." In the organizational context, "alignment is the degree to which an organization's strategy, design, and culture are cooperating to achieve the same desired goals" (Semler, p. 23, 1997). It is a measurement of how "on target" the behavior of people and systems in the organization is with respect to the organizational vision. At its heart, alignment is how effective and efficient people are at getting their organization to where they want it to be.

For an organization to have strong alignment, it must be aligned internally and externally. It must have put the internal systems into proper balance and tied the strategy and culture to the same vision. Each job, process, and system must reinforce all others. The practices and attention of the organization's culture must be focused on the things that will make it unified and successful. Any duplication or conflict between parts of the organization must be intentional, useful, or both.

Anecdotes from business leaders, as well as related research, suggest that alignment is an important contributor to organizational performance, but not a guarantee (Galbraith, 1987; Labovitz & Rosansky, 1997). Alignment helps people know what to goals to pursue. It helps people accomplish their tasks efficiently. It engages their enthusiasm for the vision. It provides smoothly operating systems and processes in which to work. Having all of these things in alignment leads to excellent performance. Keeping them in alignment is also important, and challenging. Over time, an organization must maintain and adjust alignment, both internally and externally, in order to survive in a changing marketplace. Fluid environments require rapid responses to opportunities and threats. In such an environment, strong rigid alignment will only help an organization fail faster.

Alignment Theory

So how does alignment work? Nadler and Tushman's initial work in the early 1980's provided the groundwork for alignment through the concept of *congruence*. In their article on diagnosing organizational performance (1989), they described the organization as a system of parts that must be properly balanced for best performance overall. Other authors expanded upon this idea of congruence or agreement (Bennet, Fadil, & Greenwood, 1994; Galbraith, 1987). Additional work in developing alignment theory (Semler, 1997; 1998; 1999) added detailed explanations of relationships between variables and theoretical propositions that could be operationalized and tested through research. This work with alignment theory was the first to take a comprehensive view of alignment and explain how it worked to affect performance. According to this theory, alignment produces greater organizational performance by (a) focusing the discretionary effort of organizational members on the organization's vision and by (b) optimizing systems across the organization for successful attainment of strategic goals (Semler, 1999).

These two benefits of alignment give people in the organization the knowledge they need to guide their behavior, the capability or skill to perform, and the motivation to perform. They also give the organization's processes and systems the capability to focus energy on the right things with efficiency. Taken together, these things describe the key determinants of performance, as represented by the following formula:

> **Knowledge x Individual Capability x Motivation x System Capability = Performance**
> (Semler, p. 402, 1999, adapted from Campbell, McCloy, Oppler, & Sager, 1993).

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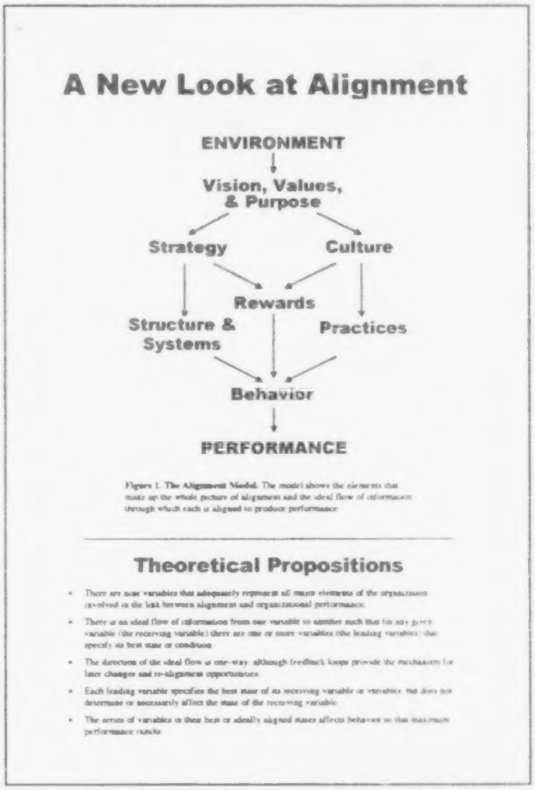
Distilled down to its essential principles, the theory offers several propositions about alignment:

- There are nine variables that adequately represent all major elements of the organization involved in the link between alignment and organizational performance.
- There is an ideal flow of information from one variable to another such that for any given variable (the receiving variable) there are one or more variables (the leading variables) that specify its best state or condition.
- The direction of the ideal flow is one-way, although feedback loops provide the mechanism for later changes and re-alignment opportunities.
- Each leading variable specifies the best state of its receiving variable or variables, but does not determine or necessarily affect the state of the receiving variable.
- The series of variables in their best or ideally aligned states affects behavior so that maximum performance results.



A New Look at Alignment

ENVIRONMENT
Vision, Values, & Purpose
Strategy
Culture
Rewards
Structure & Systems
Practices
Behavior
PERFORMANCE

Figure 1. The Alignment Model. The model shows the elements that make up the whole picture of alignment and the ideal flow of information through which each is aligned to produce performance.

Theoretical Propositions

- There are nine variables that adequately represent all major elements of the organization involved in the link between alignment and organizational performance.
- There is an ideal flow of information from one variable to another such that for any given variable (the receiving variable) there are one or more variables (the leading variables) that specify its best state or condition.
- The direction of the ideal flow is one-way, although feedback loops provide the mechanism for later changes and re-alignment opportunities.
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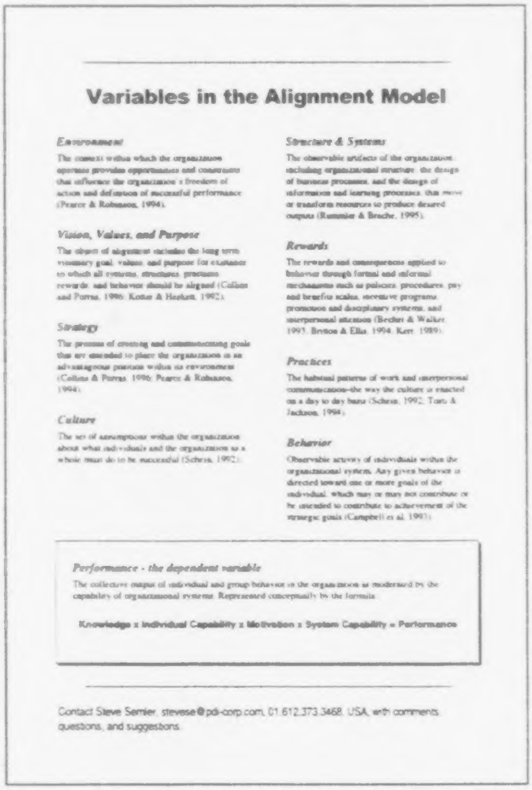

Variables in the Alignment Model

Environment

The context within which the organization operates provides opportunities and constraints that influence the organization's freedom of action and definition of successful performance (Pearce & Robinson, 1994).

Vision, Values, and Purpose

The object of alignment includes the long term visionary goal, values, and purpose for existence to which all systems, structures, practices, rewards, and behavior should be aligned (Collins and Porras, 1996; Kotter & Heskett, 1992).

Strategy

The process of creating and communicating goals that are intended to place the organization in an advantageous position within its environment (Collins & Porras, 1996; Pearce & Robinson, 1994).

Culture

The set of assumptions within the organization about what individuals and the organization as a whole must do to be successful (Schein, 1992).

Structure & Systems

The observable artifacts of the organization, including organizational structure, the design of business processes, and the design of information and learning processes, that move or transform resources to produce desired outputs (Rummler & Brache, 1995).

Rewards

The rewards and consequences applied to behavior through formal and informal mechanisms such as policies, procedures, pay and benefits scales, incentive programs, promotion and disciplinary systems, and interpersonal attention (Becker & Walker, 1993; Britton & Ellis, 1994; Kerr, 1989).

Practices

The habitual patterns of work and interpersonal communication–the way the culture is enacted on a day to day basis (Schein, 1992; Tosti & Jackson, 1994).

Behavior

Observable activity of individuals within the organizational system. Any given behavior is directed toward one or more goals of the individual, which may or may not contribute or be intended to contribute to achievement of the strategic goals (Campbell et al. 1993).

Performance - the dependent variable

The collective output of individual and group behavior in the organization as moderated by the capability of organizational systems. Represented conceptually by the formula:

Knowledge x Individual Capability x Motivation x System Capability = Performance

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Each of the nine variables in the alignment model refers to some element of the organizational system. The variables in the model do not themselves represent alignment. Instead, alignment is the degree of agreement *between* variables in the model, but not the individual variables themselves. The nine major variables are:

- Environment.
- Vision, Values, and Purpose.
- Strategy.
- Culture.
- Structure & Systems.
- Rewards.
- Practices.
- Behavior.
- Performance.

Alignment theory refers to each linked pair of variables as a dimension of alignment (Semler, 1998). For each dimension, the *leading variable* is the one that ideally determines the state of the other, labeled the *receiving variable*. Although both variables are interdependent, the system characteristics of the leading variable give it more influence over the receiving variable. This plays itself out in the ease with which one variable can affect the other. For example, an organization is nested within its environment. It is easier to select a strategy that will meet the constraints of the customer and market environment than it is to change the environment itself to meet a predetermined near-term strategy. According to Boulding and other systems theorists, this is a characteristic of a hierarchical system (Boulding, 1956). Thus, the environment is the leading variable and strategy is the receiving variable.

The interactions between leading and receiving variables manifest as specific organizational behaviors that people within the organization can observe. For example, within the *environment and strategy* dimension, one specific interaction might be the degree to which the strategic goals (receiving variable) reflect information about the organization's customers (leading variable). The operational definition of the alignment construct is the degree to which the receiving variable manifests information about the state of the leading variable.

The Effects of Alignment

Authors and researchers differ on the specific effects of organizational alignment, but generally agree that alignment unifies effort and reduces unintentional inefficiencies. Here are some specific effects of alignment suggested by theory and practice:

- Alignment increases discretionary effort directed toward strategic goals (Britton & Ellis, 1994; Semler, 1999).
- Alignment optimizes systems across the organization for attainment of the strategic goals (Labovitz & Rosansky, 1997; Semler, 1999).
- Alignment ensures compatibility and consistency of day-to-day activity and behavior with mission, strategy, and values (Kerr, 1989; Tosti & Jackson, 1994).
- Alignment reduces conflicts between different people and parts of the organization (Bennett, Fadil, & Greenwood, 1994).

Aligning the Organization

What can we do with this understanding of alignment? The three primary uses of the alignment model are organization design, performance diagnosis, and as a guide for action. This is where the alignment model earns its keep.

Design. In any organization design project, the alignment model can help leaders set up an effective design process. The model shows which things to consider first, as well as what elements should be aligned with each other. Designers should remember to consider both structural and cultural aspects of the organization as they do their work. By attending to both, organizational designers and leaders greatly increase their impact on the organization. They also enjoy a much greater likelihood that the members of the organization will embrace the design. As conditions change after the design is in place, leaders can use the model to diagnose the need for realignment to continually improve performance.

Diagnosis. Managers and practitioners can use the alignment model to compare ideal organizational states with actual conditions for each link in the model. The gaps between the ideal and reality will provide some points at which to target an intervention strategy. The diagnosis of alignment gives managers critical information about the effects of unintended conflict within their organizations. Knowing what issues to address and who to involve is often half the battle in organizational change efforts.

Acting to Align. The alignment model helps managers identify all of the elements to consider when trying to make any organization-wide change. Few lasting changes are possible without broad, reinforcing changes in all elements of the model. Correcting misalignment or realigning the organization to meet changing demands usually requires more than one basic type of intervention. For example, process redesign, training, and a change in executive priorities may be required to address misalignment of systems and practices. The people who design and lead these interventions have to make sure that each change supports the others and is driven by the business needs of the visionary goals. When interventions or changes are tied together this way, the organization enjoys much greater success than it would with separate fixes applied in isolation of one another.

Summary

Aligning the organization is a far-reaching and complex task. It requires leadership and influence skills, patience, and the ability to see the organization as a system. The implication of theory and experience is that greater alignment produces greater performance. This model explains how alignment works and how the different elements of the organization should be linked to produce optimum performance. Organizations that use this model to diagnose and improve alignment will be able to apply a thorough systems approach to their efforts. This will make it easier to engage people's energy and ideas to produce successful change. With good tools and a sound approach, managers can help people make changes that are exciting, motivating, and challenging for the future. These are the benefits of aligning the organization.

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Coaching in Organizations: Self-Assessment of Competence

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To identify developmental needs of managers and peers to function more effectively as coaches, an instrument was developed. After several versions had been pilot-tested, using scales that emerged from a literature review, followed by expert review and factor analyses, the current version emerged with four scales. Respective reliabilities (Cronbach alphas) were .68, .36, .51, and .74, with an overall alpha of .80.

Keywords: Coaching, Management Development, Organization Development

The increasing pace of global, economic, and technological development makes change an inevitable feature of organizational life. Corporations today eagerly embrace innovations (work force diversity, re-engineering, empowerment, self-directed teams, learning organizations, customer service) to meet the forces posed by the changing nature of work, technological advances, and global competition. These forces are interrelated and changing rapidly, making a highly uncertain and chaotic environment for many organizations. Organization development (OD) is playing an increasingly key role in helping organizations to change themselves and improve organizational effectiveness and employee well being in order to survive in today's environment. A popular OD strategy is "coaching"--a management philosophy that significantly changes the relationship between manager and employee (Rothwell, Sullivan, & McLean, 1995).

The concept of manager-as-coach is increasingly important in the management literature (Graham, Wedman, & Garvin-Kester, 1994; Kanter, 1989; Orth, Wilkinson, & Benfari, 1987; Stowell, 1988; Sussman & Finnegan, 1998). Faced with demands for new approaches to problem solving, organizations are attempting to develop more self-managed teams to improve worker performance (Harper & Harper, 1992), and to develop more self-managing work teams to create organizations that can learn continually (Huisman, Peppel, & Nijhof, 1996). These changes call for managers to assume a greater role as coach.

Statement of the Problem

Given the emerging role of managers (and sometimes peers) to function as coaches, an assessment method to determine developmental needs would be helpful. The question for this research is, Can a valid and reliable (at least .70 Cronbach alpha) instrument be developed with appropriate sub-scales to determine developmental needs of managers and employees to serve as coach?

Review of the Literature

Traditional organization development methods, adult education, management training, industrial-organizational psychology, and general consultation skills blend to define coaching in organizations. Several other approaches contribute to diagnosing coaching behaviors. For instance, the theories and methodologies of clinical psychology, with its strong historical emphasis on diagnosing and changing the dysfunctional behavior patterns of individuals, are now being applied to consulting approaches used with executives in organizations (Kilburg, 1996). Zimmerman and Protinsky (1993) indicated that a family systems consultation approach can be used in coaching. A multi-disciplined approach may be needed to develop coaches.

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What is Effective Coaching?

The concept of coaching has been discussed in the field of sport behavior and psychology, youth and adult education, counseling, clinical psychology, family therapy, management training, industrial-organizational psychology, and so on. Sports coaching seems to be the origin of much of the talk about coaching in business/industry organizations. Not surprisingly, much research on sports coaching has been done. As just one example, Smith, Smoll, and Hunt (1977) developed the Coaching Behavior Assessment System (CBAS) that consists of twelve behavioral categories derived from content analyses of coaching behaviors during practices and games.

The application of coaching as a concept and set of techniques to the practice of management has grown rapidly through the 1980s and 1990s. In 1981, Personnel Decisions International (PDI) became the first management consulting firm to offer a coaching program that was both structured and personally tailored to accelerate individual change and development (Peterson, 1996). It defined coaching as "the process of equipping people with the tools, knowledge, and opportunities they need to develop themselves and become more effective " (Peterson & Hicks, 1996, p. 14). Two empirical studies showed that PDI's coaching program produced significant, observable changes that were sustained at least two years after coaching was completed (Peterson, 1996).

Recent literature on coaching in the field of management and consultation has discussed the new role of "manager as coach" as one way of changing the relationship between manager and employee (Evered & Selman, 1989; Geber, 1992; Orth et al., 1987). Orth et al. (1987) differentiated coaching from career counseling in organizations. They described coaching as a "management technique that is based on knowledge about how and under what conditions employees improve and grow and on specific skills that managers need to practice, develop, and incorporate into their management style" (p. 74). Other studies have focused on the perceptions of subordinates in a coaching relationship (Graham et al., 1993). All of these authors have different ideas of what a coach should do in organizations and what kinds of skills and characteristics a good coach should have.

Unlike prevailing management paradigms focusing heavily on control and order, coaching focuses on discovering actions that enable and empower people to contribute more fully, productively, and with less alienation than the control model entails (Evered & Selman, 1989). Drawing on direct experience of coaching and being coached, their observations of great coaches, and their review of literature, Evered and Selman (1989) defined ten essential elements or characteristics that not only define coaching as distinct from other techniques, but also express the core of coaching: developing a partnership, a commitment to produce a result and enact a vision, compassion and acceptance, speaking and listening for action, a responsiveness to employees, honoring the uniqueness of employees, practice and preparation, a willingness to coach and be coached, a sensitivity to individuals as well as to groups, and a willingness to go beyond what has already been achieved. Further, Zemke and Anderson (1997) stated that "the purpose of coaching is to help an individual customer service representative improve in a specific area of his or her job or enhance or extend a valuable skill in a new way " (p. 2). They emphasized the need to encourage managers to lead and improve performance, rather than to boss subordinates around; to question and ask subordinates how to improve performance, rather than tell them what to do. This type of leadership is especially important for self-directed teams that need support and empowerment from the top rather than control.

Barriers to Effective Coaching

Nevertheless, coaching still remains a neglected function in many organizations. Time constraints and changes in managers' attitudes are two perspectives from managers as to why coaching is neglected. As Kelly (1985) noted, "Coaching is too time-consuming," "I can't suddenly change my role as a manager," and "It takes forever to realize any change" (p. 54). In addition, Orth et al. (1987) pointed out that organizational climate is crucial in creating a coaching culture. Many organizational climates are not conducive to coaching, and managers are not rewarded for developing employees. As a result, managers are not motivated to initiate the new role of coach. In other words, without a management style that emphasizes coaching organization-wide, managers may not recognize the benefits of coaching to themselves nor to their subordinates.

Developing Coaching Competence

Coaching skills can be enhanced through systematic training. Kelly (1985) and Geber (1992) described how to train managers for their roles as coaches. As Kelly indicated, "Forcing coaching down field managers' throats never seems to work. Using corporate training tools does. The systems include senior management's cooperation and field managers' performance evaluations, salary reviews and promotion reviews" (p. 54). Further, he acknowledged the difficult job of learning new coaching skills and behaviors and integrating them into one's management style. Geber (1992) also argued that the role of coach is ". . . the most difficult one to perform and requires the biggest paradigm shift of any in the new system" (p. 25).

Fortunately, coaching skills can be learned and developed through a combination of training and on-the-job follow-up (Graham et al., 1993), and a desired effect on manager coaching behaviors can occur when the training is an integral part of a coaching skills development program (Geber, 1992; Kelly, 1985). However, as with any systemic approach to training, some form of needs assessment is needed (Swanson, 1999). The instrument developed in this research was designed to provide a self-assessment of such needs.

Issues Related to Coaching

There are a number of issues associated with the implementation of coaching interventions in organizations. Some of these are described below.

Losing Power and Control

Fear on the part of management of losing power and control is highly associated with coaching (Foegen, 1998). Control over employees is traditionally a vital function of management and varies only in degree and style. Some control has already been decreased when hierarchy levels become flattened. In addition, as present management styles have emphasized decentralization and cross-functional teams, managers' power of controlling and ordering subordinates has declined. Graham et al. (1993) suggested that coaching skills are a complicated aspect of management because of the issue of span of control.

Changing Roles

Geber (1992) indicated that coaching is difficult to perform and requires perhaps the biggest shift of any in the new management system. Managers feel compelled to learn coaching skills and to transform into this new role quickly. Subordinates will also have difficulty in a coaching relationship if the managers do not want to change their perceptions of managerial behavior and attitudes.

Gender Differences

Millard (1996) found that male coaches engaged in keeping control and general technical instruction more frequently and in general encouraged less frequently than did female coaches. Chelladurai and Saleh (1980) concurred that leader characteristics, including gender, do affect leaders' behaviors.

Gender is significantly related to role preference (Bain & Wendt, 1983). Their study showed that male subjects indicated a greater preference for the coaching role than did female subjects. In contrast, Jambor and Zhang's (1997) study, using the Revised Leadership for Sport Scale (RLSS) to determine differences in leadership behaviors, showed no significant differences between male and female coaches and no significant interactions between gender and coaching level.

Conflicting Roles

Most of the literature on individuals who are both coaches and managers has failed to distinguish between role conflict and role strain. Role conflict and role strain may be experienced by individuals who simultaneously occupy multiple roles. Role strain, in contrast to role conflict, is an exposure to demands which require more time, energy and commitment than one can provide (Bredemeier, 1979). Occupying the dual role of manager/coach seems to be a source of stress, but researchers are uncertain as to the extent to which the stress results from extra time demands and to what extent from contradictory role expectations.

Another aspect of role conflict is the expectation of subordinates compared with the understanding of managers relative to what a coach should do. Stowell's (1988) study showed that managers prefer to talk about their employees' personal style, skills, and communication, while employees would rather stick to task-related or job-related issues in the coaching process.

Impact of Coaching Behavior on Psychosocial Behavior

Within the sports coaching literature, it has been determined that coaches' behaviors impact subordinates' psychosocial behaviors. Black and Weiss's (1992) study indicated that young athletes' self-perceptions and motivation are significantly related to the quantity and quality of coaching feedback they receive for performance success and errors. Additionally, Smith et al. (1979) found that coaches who displayed more encouragement, positive reinforcement, instruction, and less criticism had players who enjoyed baseball more and had higher levels of self-esteem. Thus, sports coaches' behaviors, at least, not only influence work enjoyment and self-esteem, but also influence perceived success, effort, and preference for optimally challenging activities.

Numbers of People Coached

"Should everyone be coached?" One of the concerns of management is that they will be faced with time constraints in providing the coaching desired by subordinates. As a result, empirical evidence suggests that personal coaching and counseling are selectively targeted toward those whom senior managers believe will be successful (Sussman & Finnegan, 1998). If managers coach only those who are potential stars or who fail to meet the standards, instead of coaching everyone in the organization, will the problem of time constraints be solved?

In Graham et al. (1993), the results indicated that those managers with fewer subordinates often received higher scores on eight coaching behaviors. Further, they pointed out that managers who had eight or fewer people to supervise generally received slightly higher preliminary ratings on coaching skills than those who supervised more people.

Measurement of Coaching Competence

The review of the literature on coaching demonstrates that there is an extensive history and broad empirical base available on the general topic of coaching, especially in athletics and dealing with the problems of special needs populations. Though the application of coaching as a concept and set of techniques to the practice of management has been growing rapidly since the early 1980s, the scientific basis for these applications is extremely limited at this time.

Instruments designed to test the relationship between coaching behaviors and psychosocial variables can be used indirectly to provide needs assessment of coaching competence if desired. Such literature is centered on earlier coaching behavior studies. Besides the CBAS that was used to code systemically what kind of behaviors coaches have in games and practices and could further be used to assess what kind of skills coaches need to have, the Leadership for Sport Scale (LSS) is another kind of instrument developed. Chelladurai and Saleh (1980) investigated five leadership behaviors which were used to measure coaches' perceptions of their own behavior and developed the Leadership for Sport Scale (LSS), including five leadership behaviors (training and instruction, democratic, autocratic, social support, and positive feedback). Later in 1997, Jambor and Zhang modified the LSS to a Revised Leadership Scale for Sport (RLSS) by adding situational consideration to the variables used in the LSS to provide another behavior in which leaders may operate. The scales by Chelladurai and Saleh (1980) and Jambor and Zhang (1997) include methods for assessing athletes' perceptions and preferences and coaches' perceptions. All of these examples, however, are related to sports, not business.

In addition to research-based instruments designed to measure coaching behaviors and competence as described above, instruments developed by consulting firms are used and available in business workshops. For instance, Phil Lowe (1995) from Harbridge Consulting Group provided five skills of coaching to clients, including providing structure, active listening, asking questions, making suggestions, and giving feedback. In spite of various techniques and exercises to practice the skills, Lowe did not provide theoretical backgrounds as to how the skills were identified and developed. Berry, Cadwell, and Fehrmann (1995) developed the Coaching for Results Assessment Instrument (CFRAI). This instrument was designed to act as an indicator of coaching skill development need. Thirty-six skills were developed within fourteen modules. Module numbers refer to the number assigned to the training session that deals with that particular skill. Unlike other instruments, CFRAI is designed so users can evaluate themselves and request their managers to evaluate them. It is also suggested that users solicit the opinion of their managers, subordinates, and coworkers to ensure a full 360-degree evaluation of their coaching skills.

Methodology and Results

This section describes the steps taken to develop a self-perception needs assessment of coaching competence, including item development, validation, reliability, pilot tests, and statistical measures used. The results of each step are reported after each stage of the process is described.

Item Development

Several approaches were used to insure that appropriate items were selected for the profile instrument. One approach was behavioral observation. Each of the authors (Tolbert, Larkin, & McLean, 1998) has been involved as a mentor and as a mentee, as have the ten members of the national expert panel used to validate the instrument. The initial pool of items was influenced by their experiences of what seemed to work and not to work in these relationships. This list was checked against the literature relating to coaching.

Model Development

This information was used to create a four-factor model for coaching: Interacting (Closed/ Open), Advising (Telling/Exploring), Collaborating (Independent/Interdependent), and Supporting (Discouraging/ Encouraging). The dichotomous nature of these four factors led to the decision to develop forced choice items, with a response representing each of the dichotomies. With these categories in mind, a large number of potential pool items was written. The authors refined these items, resulting in 20 items within each category. The desired outcome was a minimum of ten items in each category; creating 80 items would allow for a reduction of 50% based on expert review and psychometric findings.

Review by National Experts and Target Respondents for Face Validity

Ten national experts were identified based on three criteria: active in the field of human resource development, experienced as a coach/mentor, and the inclusion of coaching as a core component of their business. Attempts to have the ten experts categorize the 80 items proved not to be useful, both because of wide discrepancies in how they classified the items and because it was unnecessary due to subsequent psychometric analyses. However, their review did confirm the usefulness of all 80 items for a coaching instrument and also provided useful feedback on clarity, wording, and potential uses of the instrument.

In addition, the 80 items were administered to 56 graduate students enrolled in two Organization Development classes and one Managerial Communication class. The majority of these students are employed in businesses that are potential users of the instrument. A fourth class, in Educational Psychology, was also used because of the expertise of these students in psychometric matters. All students made comments on the instrument with recommendations for change.

Based on this input, revisions were made, maintaining the construct of the four factors with dichotomous choices. An additional 20 items were also developed reflecting various philosophies of coaching, with the idea of determining whether one's philosophy about coaching and mentoring would determine how they responded within each of the four factors.

Beta Test

The revised instrument was administered to 475 respondents. Respondents reflected a broad range of industries, job positions, and ages, and reflected almost equal male-female participation.

Psychometric Analyses

Several analyses were run to reduce the length of the instrument, to determine the validity of the four factors hypothesized in the development of the instrument, and to determine reliability.

a. A frequency count was run to determine the ability of each item to discriminate between the two dichotomous options. When one option was selected by 89% or more of respondents, it was eliminated from the pool as being overly socially desirable. This process eliminated 13 of the 80 items from the initial pool, leaving 67 items.

b. An item-total test correlation was run for each of the remaining items. While the overall reliability was .83, there were 7 items for which the relationship was negative or less than .1 (individual reliabilities are generally lower with dichotomous variables than for Likert-scale variables because there is less item variance). Because these items were judged not to be contributing to the overall construct of coaching and mentoring, they were removed from the pool of items, leaving 60 items in the pool.

c. A principal components factor analysis was then run on the remaining 60 items. An eigenvalue chart was constructed based on the results. The chart flattened after the 7th factor, suggesting that the top seven factors were contributing significantly to the coaching construct. The first seven factors were then examined. The first six factors were fairly easily labeled, as they were similar to three of the four factors hypothesized in the beginning, only with more detailed distinction among the factors. The seventh factor, however, could not be labeled, as the items in that factor exhibited no cognitive fit. This resulted in the elimination of 6 items. Five items were also eliminated from the first six factors because they did not fit cognitively. The total pool was thus reduced to 49.

Because of the removal of these items, it was necessary to run the factor analysis one more time to determine the appropriate assignment of an individual item to a factor. Seven factors were again determined; while all factors could be easily labeled, the 7th factor contained only three items, which was deemed to be too few to provide reliable feedback to respondents. Thus, these three items were eliminated, resulting in a final pool of 46 items with an overall reliability of .81, with all individual item-total instrument reliabilities significant at $p.<.05$ and greater than .1.

The six-factor analysis was reviewed to determine if all items could be classified within the six factors; several items that were in this analysis did not fit cognitively the factor to which it was assigned. The decision, then, was to use the first six of the seven factors in the seven-factor analysis. It was not necessary in this analysis to omit any item from any factor to provide cognitive fit. The resulting six scales were, from strongest to weakest: Individual-Team Perspective, Closed-Open Interactions, Focus on Self-Others, Status Quo-Risk Taking, Limited-Expansive Thinking, and Discouraging-Encouraging Support. The only one of the original four factors not to emerge was Advising (Telling/Exploring). Each of the other three factors emerged with two in their original form (Closed-Open Interactions and Discouraging-Encouraging Support). The Independent-Interdependent factor emerged as two factors: Individual-Team Perspective and Focus on Self-Others.

Instrument Revision

With the above information, it was decided that greater variability was needed to strengthen the items because of the restriction in variability found in a dichotomous scale. , the instrument was rewritten using a Likert-scale of seven items. Randomized polarity was used (i.e., based on the research, some items had the desired items on the left, while others were on the right).

This revised instrument was again submitted to the panel of ten experts, with eight responding. It was also given to a selected group of graduate students employed in HRD in industry. The combined feedback from these groups was used to revise the instrument. A 36-item instrument resulted, based on four factors: Communication, Performance, Support, and Challenges. Within each factor, a dichotomous relationship existed within the Likert scale for each item: independent and private vs. interdependent and open (Communication), focus on self vs. focus on others (Performance), results-oriented vs. explorative (Support), and risk-avoidance vs. risk-tolerant (Challenges).

The revised instrument was administered to four graduate Organization Development classes and an International Human Resource Development class, for a total of 97 responses. Greater variability did result, with all 36 items having a standard deviation of .99 or greater. The change to a Likert-scale definitely overcame the problem of restriction of range in the responses that had existed with the forced-choice responses.

The Cronbach alpha results of the second beta test have resulted in disappointing scale reliabilities, respectively .68, .36, .51, and .74. Two met (or almost met) the pre-established target of .70 (Communication and Challenges). However, two scales were considerably below the target (Performance and Support). Overall, however, the Cronbach alpha was .80--well above the pre-established target. The results suggested that the instrument was a reliable measure of overall coaching competence, but only two of the scales would provide reliable information at the detail level.

Another principal components factor analysis was run to verify or reject the current version of the instrument's four factors. Twelve factors had eigenvalues in excess of 1.0, accounting for 68.7% of the variance, while the eigenvalue chart tended to level after six factors, explaining 47.1% of the variance. In general, the categories were confirmed, with greater detail: (in order) Comfort with Ambiguity, Closed, Relationships, Other-Focused, Confront Criticism, and Anonymity. However, only the first two had sufficient items to be useful in providing feedback: 7 and 4.

Conclusions and Recommendations

Three years' of development on this instrument, and the careful application of psychometric measures, has resulted in an instrument that meets the pre-established standards for overall feedback on the self-assessment of coaching skills. However, it has still not resulted in an instrument that meets the standards established by the authors based on the established scales. A decision must now be made to abandon the process of working on scales or to undertake at least one more major revision.

Failure to develop an acceptable instrument to date raises several questions. First, are the constructs related to coaching still not well enough developed in the literature to provide the necessary direction needed to develop an instrument? It is clear from the differences seen in the literature review that there is not yet an accepted set of competencies required of coaches in the business setting.

Second, the problem may be that self-assessment does not provide sufficiently accurate and discriminating information to provide meaningful feedback that will assist in development. Perhaps having subordinates, peers, and supervisors complete the instrument might provide more effective discrimination that would be more useful in providing information for training and development professionals. However, McLean's (1997) cautions about the use of multirater evaluation is likely to apply here as well. McLean also suggested, however, that such an approach can be useful if used solely for developmental purposes.

Finally, we may be faced with a theory/practice dichotomy. The instrument has been developed based on the research. However, the experts used and the respondents tend towards a practice orientation. As in other areas of human resource development, practice may not coincide with theory, creating difficulty in having the constructs identified through the literature confirmed in the application. The existing instrument appears to meet all necessary criteria for overall feedback. Nevertheless, efforts to establish a useful instrument must continue if coaching is to remain an important approach in the business setting, and if human resource development professionals are to help managers in developing coaching competence.

Contributions to New HRD Knowledge

First, this study has shown that a valid and reliable instrument for self-assessment of coaching skills can be developed. Use of this instrument will help HRD professionals to assist in developing coaching skills. Second, this study has confirmed the ongoing difficulty of identifying a coherent, valid, and reliable subset of skills that account for overall coaching skills. Third, as instruments do exist for measuring coaching skills that do not provide psychometric information, the difficulties encountered in this study require HRD to continue to be vigilant in demanding appropriate psychometrics for any instrument used in practice.

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An Examination of the Role of Failure in the Development of Workplace Expertise

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Of increasing importance to an organization is its ability to effectively develop the skills of its workforce. Research indicates that, in the development of workplace expertise, job related experiences are the most important source of learning. There is a general belief that people learn from their mistakes, which implies that experiences of failure could be used to accelerate the development of expertise. If true, this could have a significant impact on the field of HRD.

Keywords: Expertise, Informal Learning, Failure

During the 1990's, the field of business management began to recognize and promote the organization's human resources as a source of significant and sustainable competitive advantage (Prahalad & Hamel, 1990;Senge, 1990; Quinn, 1992; Pfeffer, 1994, 1998). The source of this competitive advantage is acknowledged to be the capacity to do work that groups of individuals bring every day to the organizations they serve. This capacity to do work, generally defined by the term employee competence, stems from the knowledge, skills, and abilities possessed by the organization's employees that enables them to act efficiently and effectively in a wide variety of situations. This combined set of knowledge, skills, and abilities possessed by the organization's employees is what is commonly termed workplace expertise (Swanson, 1994). Having recognized the importance of workplace expertise many organizations are expecting their HRD professionals to respond with solutions that promise the rapid development of workplace expertise and individual competence.

The Role of the Learning Experience in the Development of Workplace Expertise

Individual competency is commonly defined as a cluster of related factual knowledge, skills, experiences, attitudes, and value judgements directly related to one's job (Parry, 1998). The ability to transform one's knowledge, skills and experiences into consistently demonstrated actions which are both optimally efficient in their execution and effective in their results has been operationally defined as human expertise (Herling, 1998). Workplace expertise thus consists of job-related knowledge and experience which forms the basis of real understanding and from which the individual can derive insightful solutions to progressively difficult problems.

Based on the identification of these three components of workplace expertise – job-related knowledge, experience, and problem solving heuristics - the task of developing workplace expertise has definition. The means by which this task can be completed has also been identified. Research on human expertise, specifically in the fields of athletics and the performing arts, has shown that expertise is developed through extensive and intensive training and practice (Ericsson & Charness, 1994). However, knowing that expertise can be developed through intensive training does not address the problem the HRD professional is now being tasked with, that of reducing the amount of time required to develop workplace knowledge and skills.

Unfortunately, this problem is not so easily solved. First, to become an expert, researchers have postulated that it requires approximately 20,000 hours, or roughly 10 years, of combined education, training, and experience (Posner, 1988; Bereiter & Scardamalia, 1993). Due to the rapid and constant changes in both technology and the marketplace, organizations are simply not afforded the luxury of having years to develop their workplace expertise. In addition, research that has been conducted in areas of study other than that of human expertise (Zemke, 1985) seem to contradict the findings of the expertise research of Ericsson and Charness, indicating that extensive training is not the means through which workplace expertise is developed.

Jacobs and Jones (1995) noted that between 80% and 90% of an employee's job knowledge and skills (workplace expertise) are learned on the job, attaching to this statement their observation that much of this learning occurs in an unstructured manner. Although their specific source of this interesting statistic was not identified, as a

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generalized statement it is possible to draw a similar conclusion from the findings of research conducted between 1979 and 1985 relating to how managers within the Honeywell corporation learned how to manage.

From the results of a survey given to 3600 Honeywell managers it was concluded that job-related knowledge and skills are acquired from three primary sources. Based on the Honeywell study the foremost source of learning was derived from the kind of job experiences and assignments the individuals received. The second source of learning was attributed to the working relationships these individuals had with others in the organization, and particularly with their supervisors. The third significant source of learning was attributed to the formal training these individuals had received, with the disclaimer that this meant it only referred to training that had occurred at the right time, meaning at or near the time of the change in their job assignment. From these same survey results it was estimated that the three sources of learning contributed 80 percent, 10 percent, and 10 percent respectively to the development of the manager's expertise. From the analysis of additional data collected from follow-up interviews conducted with 10 percent of the original survey group this ratio was revised to 50 percent, 30 percent, and 20 percent respectively (Zemke, 1985). Thus, assuming that the process of learning how to be a manger is representative of the process required for learning any other job function, it could be concluded that 80 percent of what an individual learns about doing his or her job occurs either directly or indirectly as a result of actually having to do the job.

More importantly, what the Honeywell study suggests is that workplace expertise is not developed from extensive and intensive training and practice. Workplace expertise is instead acquired through experience gained from having to actually perform the tasks and make the decisions required to fulfill the obligations and responsibilities associated with the specific job. This possibility, that workplace expertise is result of acquired workplace experiences, carries with it significant implications for the practice and profession of HRD as related to the training and development of the individuals that comprise the organization's workforce.

If experience is the primary source of workplace expertise then the key to the development of workplace expertise resides in the selection and provision of appropriate and meaningful experiences. As Bereiter and Scardamalia (1993) observed in the performance of equally experienced schoolteachers (based on equality in both the training received and the number of years worked) accumulated experience "distinguishes old-timers from beginners, but does not distinguish experts from experienced non-experts" (p. 81). Experience that contributes to the development of expertise is heavily dependent upon the type and quality, as well as the quantity, of the events the individual participates in or is exposed to. It therefore stands to reason that if, from all the workplace experiences an individual encounters, only those experiences that actually contribute to the development of workplace expertise could be identified and replicated then the time required to develop an employee's workplace expertise could be greatly reduced.

The Difficulty of Identifying Learning Experiences that support the Development of Workplace Expertise

The identification of experiences that contribute to the development of workplace expertise is in essence a task of separating learning experiences from non-learning experiences. Based on research examining the nature of learning in small business environments it was concluded that "learning occurred when experience was transformed into new knowledge, skills, or attitudes that led to changed behavior" (Ziegler, 1999, p. 58). This benchmark provides a standard for the identification of learning experiences based on observed outcomes.

Related research on organizational learning, a second study specific to how managers learn, observed that "the extent to which learning will occur within such experiences depends on the degree to which (individuals) are attentive to their environments and open to changing old mindsets" (Dechant, 1999, p. 45). Thus the level of individual attentiveness to any given task serves as a predictor of learning experiences.

It therefore seems reasonable to expect that, equipped with both a standard and a predictor, one should be able to observe a series of workplace experiences and be able to distinguish those that are learning experiences from those that are non-learning experiences. Unfortunately, this does not appear to be the case, as demonstrated by the acknowledged existence of tacit knowledge, which is recognized to be the result of unconscious involuntary learning. As summarized by Durrance (1998), tacit knowledge guides how people behave and act. Tacit knowledge is considered to be deeper (less tangible) than explicit knowledge because it is internalized when individuals are least conscious that learning is taking place, implying that not all learning experiences are easily identified, even by the individual being subjected to the learning experience.

The difficulty in simply separating learning experiences from non-learning experiences arises from the fact that on the job learning can occur in a number of different ways. Marsick and Watkins (1990) have examined, described, and as a result categorized the nature of learning in the workplace as being either informal or incidental.

Reber (1989) noted that learning on the job can also be implicit, or a process by which knowledge is acquired independently of conscious attempts to do so. Thus, when viewed from the perspective of the individual, it can be seen that learning, as a result of events experienced or actions taken on the job, can be intentional (informal learning), unintentional (incidental learning), or non-intentional (implicit learning).

Watkins and Marsick (1990) have defined informal learning as an explicit activity that is "predominantly experiential and non-institutional" (p. 7). Although informal learning will vary from event to event, in terms of the degree of control exercised by the learner, the location, and the predictability of outcomes, it is an activity that the individual intentionally engages in with an expectation that he or she will "learn something."

While informal learning takes the form of self-directed learning activities, coaching, mentoring, networking, and even trial-and-error experimentation, incidental learning is completely unintentional. It is the by-product of some other activity the individual has engaged in, and one that carries with it no expectation of either having learned something or of having one's behavior modified. Incidental learning includes learning from mistakes and learning by doing, and because this learning takes place without intention and in the normal course of daily events, the lessons being conveyed are often hidden within the interaction (Watkins & Marsick, 1990).

Both informal and incidental learning will produce explicit knowledge, and upon reflection of the associated experiences, the individual will recognize that learning occurred. This will not usually be the case regarding implicit learning. Implicit learning produces tacit knowledge, and tacit knowledge is abstract, representative of the structure of the individual's environment, and used implicitly to solve problems and make accurate decisions about novel circumstances (Reber, 1989). Reber (who coined the expression implicit learning in 1967) has defined implicit learning as "the acquisition of knowledge that takes place largely independently of conscious attempts to learn and largely in the absence of explicit knowledge about what was acquired" (1993, p. 5). As a result, the experiences that produce tacit knowledge, a significant part of workplace expertise, may be the hardest to distinguish from non-learning experiences.

Implicit learning aside, the separation of learning experiences from non-learning experiences has the characteristics of an improbable task. Nonetheless, being able to identify those experiences that directly contribute to the development of workplace expertise is still a worthy objective.

Using Failure as a Means of Identifying Relevant Learning Experiences

All actions taken by an individual, regardless of their relative importance or complexity, can be readily classified as either being successful in achieving their intended outcome, or as having failed to do so. Marsick and Watkins have noted that people will learn from their experiences when they are faced with a new challenge or problem because this condition triggers a fresh look at their situation. Recognition of the problem is then followed by a search for alternative responses. This in turn results in new (modified or adjusted) actions being taken to rectify the problem, and finally concludes with an evaluation of results, with this sequence of steps being repeated until the problem is solved or the challenge is overcome (Marsick, Volpe, & Watkins, 1999). While all challenges and problems faced by an individual are not the result of failure (actions taken that did not achieve their intended outcomes), failed actions and mistakes generally present themselves as problems, and therefore as learning experiences.

In fact, it is a generally accepted principle that we learn from our mistakes. A perception that is supported by the accounts of 230 managers, all claiming to have learned from their mistakes, and many claiming that the lessons learned could not have been gained in any other way, or resulted in having learnt them more strongly (Pearn & Honey, 1997). Nierenberg (1996) believes that creative people in particular use failure as an opportunity for discovery because they take time to analyze errors by applying to their own mistakes the tools of common observation, self-inquiry, reflection, and the acquisition of additional knowledge.

Of course, not everyone buys into this belief that one learns from one's mistakes. In the first place, there is the recognized effect of positive reinforcement that supports a belief that what one learns is derived from one's successes and not from their mistakes. Then, there is the corollary to the espoused learning-from-one's-mistakes principle that implies that mistakes tend to be repeated, with the end result being that people and organizations do not learn from the results of their own actions or from the actions of others (Feldman, 1986). Marsick, Volpe, and Watkins (1999) appear to support this premise, having suggested that people often do not learn from their mistakes, instead, they tend to reinforce their mistakes because they do not examine the reasons, causes, or decisions that led to their failure.

I propose that the power of failure, and the experiences of failure, should not be so readily dismissed. Whether or not we are cognizant of it at the moment of occurrence, learning is a dynamic process based on association between stimuli, responses, intended outcomes, and realized outcomes. I would suggest that in the workplace, success is the outcome that brings the learning process to a conclusion whereas it is the experience of failure that initiates and fuels the process. As Bronowski (1977) observed, if you put a mouse in a maze and it gets it right the first time it has not learned to run the maze, and it will not learn to run the maze until it makes some mistakes and learns to avoid them.

The subject of human error has been the focus of rigorous research. This research appears to be little known outside of the settings where there is risk of catastrophic failure, specifically the fields of nuclear power generation, aviation, and health care. Research on human error, which has been predominately conducted within the derivative fields of cognitive psychology, cognitive science, and cognitive engineering, has generally focused on the causes, prediction, and correction of error (Senders & Moray, 1991; Denning, 1990; Reason, 1990, 1987b; Johannsen, 1988; Green, 1988; Rassmussen, 1987b). The overarching questions of these research efforts have related to why do we make mistakes and how do we detect errors in our actions and the actions of others. There has been some research related to learning from failure (Salas, Prince, Bowers, Stout, Oser, & Cannon-Bowers, 1999; Fortune & Peters, 1995) but the focus of this research was in the area of error prevention. At the time of this writing there is no evidence that any research has been completed that is related to how, or to what extent, experiences of failure have contributed to the development of workplace expertise.

A Belief Examination of the Characteristics of Failure

Everyone is subject to errors in both belief and action. Nierenberg (1996) claims that 30 to 40 percent of all workers' and executives' time is spent in preventing, participating, correcting, or handling errors. Although this may seem unrealistic, an analysis of any task will show that there is usually only one way to do the task correctly but many ways to do it wrong. It should come as no surprise then that, as Feldman (1986) has noted, the research literature is replete with studies of error rather than accuracy. The odds against error free performance are overwhelming, providing good reason to believe that during any given day we will make numerous errors and, because of the sheer numbers, that many of these errors will be similar if not identical to errors that we have made before. It is therefore reasonable to assume that we don't learn from *all* of our mistakes. However, Reason (1990) has observed that in comparison to the vast potential for failure, human error is not abundant. The implication of this apparent paradox is twofold. First, that we must be learning from most of our mistakes or we would lack the ability to prevent them and failure would be more abundant, second, that not all mistakes are created equal.

Up to this point the terms error, failure, and mistake have been used somewhat interchangeably. Before proceeding it seems advisable to provide some clarification. Error has been the favored term of the research where it is used as a general descriptor to indicate any inappropriate action or decision taken or made by the subjects of the study. Within the pages of this discussion, failure is being viewed and used as the overarching concept for defining and describing the results of unsuccessful actions or decisions. The decision for this deviation from past practice is based on the fact that the focus of human error research has typically been on the causes of incorrect actions whereas this discussion is interested in the results of those actions.

To each unsuccessful action or decision can be attached one or more attributable causes and a consequence, or unintended outcome. Based on the attributed cause of unsuccessful actions and their resulting consequences, failures have been categorized as slips, lapses, errors, mistakes, blunders, and catastrophic failures (Nierenberg, 1996).

In earlier paragraphs, those specifically discussing the possible relationship between learning and failure, the term of unintentional outcome was used several times. Reason (1990) has argued that the notion of intention and error (the wrong action or decision) are inseparable. Reason has stated that to define error one must begin by giving consideration to the variation that exists in intentional behavior. In other words, from a research perspective, one begins the analysis of error by asking if the actions of the individual were directed by some prior intention.

The result of intended actions that do not achieve their desired end, in other words intentional but incorrect actions that are successfully executed, are viewed as mistakes. Intended actions can also result in blunders and catastrophic failures, mistakes of such magnitude that they conclude in the loss of human life and limb, or of large sums of money (Nierenberg, 1996). Blunders and catastrophic failures are generally the result of a snowballing series of compounding incorrect actions and inappropriate decisions initiated by a small mistake or a simple error.

Errors are the result of unintentional actions, or planned actions that did not proceed as planned (Nierenberg, 1996). From the perspective of outcomes, an error is the result of a deviation from a standard situation in which one has a certain degree of control.

The results of non-intentional actions, actions that are not planned but have supplanted an intended action, are either slips or lapses.

A related term, one that may seem to have gained some importance at this point if only by its omission, is accident. If there is no intention in either the actions or thoughts of the individual, in other words the action was completely involuntary, the result is an accident. Accidents are not included on the continuum of failure even though the consequences of accidents can be identical to those of any of the identified forms of failure.

As stated, the results of non-intentional actions have been identified as either slips or lapses (Nierenberg, 1996). Slips and lapses result from either a failure in the execution of an intended action (a slip) or a failure in the recall of an action sequence (a lapse). Slips and lapses are generally related to failures associated with tasks we have correctly performed many times before, such as the misspelling of a common word, inadvertently substituting the names of family members, or the forgetting to turn-off the stove after we have cooked a meal. Because these failures are associated with tasks that we tend to perform sub-consciously, and tasks that we also tend to perform correctly most of the time, our common response to a slip or a lapse is that we just weren't thinking. Revisiting the two arguments: we learn from our mistakes, and we keep making the same mistakes ergo we don't learn from our mistakes, the latter one is clearly referencing slips and lapses.

The types of failure identified as slips and lapses are closely linked to actions and intentions that are based on the knowledge and skills one has already mastered. As a result, these types of failure could hardly qualify as being learning experiences and therefore would play no role in the development of workplace expertise. With the elimination of slips and lapses, what remains are the failures that are the result of conscious and intentional action, failures that do not occur on a daily basis and therefore potentially represent the learning experiences from which expertise evolves.

In a discussion on human error and the search for blame, Denning stated:

> When I say I made a mistake I usually mean one of two things. I may mean that I misjudged the consequences of an action I took and the consequences had an unwarranted or unreasonable cost that must now be compensated. Or, I may mean that I had no way of foreseeing the unintended consequence, and now I regret having taken the action. In the first case I had a choice but took action in the fact of the risk, while in the second case I was blind to the consequences and had no real choice at all. (1990, p.6)

What Denning's perspective on the causes of human error suggests is that at the root of failures of conscious intended actions and decisions (mistakes and errors) lies either a failure of expertise or the lack of expertise. A failure of expertise means one has the necessary knowledge and skills required to achieve a successful outcome, but as a result of choosing the wrong action, poor execution of the correct action, poor planning, or poor decision making is unable to do so. In contrast, a lack of expertise suggests that one does not have the required knowledge or skills and is forced to create a plan of action relying on whatever relevant knowledge is currently possessed.

Feldman (1986) reported that the process of learning involves the creation of cognitive structures. It was his contention that what is learned from experience is dependent on the individual's pre-existing mental structures, environment, type of task, and type of feedback. Feldman believed that culture, training, and background influence the drawing of one's attention to the various cues presented during an experience, and to the interpretation of those cues. In other words, what one learns from an experience is, in part, is a function of what one already knows because of our tendency to pay greater attention to the things that contradict what we already believe to be true. This tendency encourages the practice of trial and error, which Feldman has suggested plays a significant role in learning from our experiences. A position that is supported by Detrich Dorner's research in the field of complex and dynamic decision-making. Dorner (1996) has noted that free experimentation, or trial and error, is the simplest and most applied cognitive tool we have for narrowing a problem. He notes that in any given problem situation we will try everything conceivable to derive a solution, using trail and error as a means of introducing mutations into our planning process. In novel situations, where we lack expertise, we not only expect failure to result from our initial decisions and actions; we accept it as a reasonable outcome, and, in the process steps outlined by Marsick and Watkins (Marsick, Volpe, & Watkins, 1999), we use it to benchmark our next set of actions.

The stimuli, or cues, resulting from one's actions are identified as feedback. As previously noted, Feldman (1986) believed that what was learned from experience was dependent, in part, on the type of feedback one received. Outcome feedback, reflected in the consequences of actions taken, was seen to have less of an impact than process feedback, which is reflective of the correctness of reasoning.

However, it was Feldman's position that one of the most potent factors in learning from experience was the nature of the task itself. From the research Jens Rassmussen conducted on the subject of human error, he concluded that the types of errors individuals made were directly related to the types of tasks they were engaged in. He associated all tasks, and subsequently the different types of errors, with a pattern of cognitive behavior based on schema structure (mental models), and categorized the nature of tasks as being either skill-based, rule-based, or knowledge-based in their behavior (Reason, 1990; Rassmussen, 1987a).

Tasks that are skill-based rely on stored patterns of preprogrammed instruction. They are the tasks or actions we execute subconsciously. The errors occurring at this level, predominately slips and lapses, are typically related to intrinsic variability of applied or resisting forces and the coordination of space and time (Reason, 1990). Simply put, skill-based errors are generally the result of either inattention or overattention. As previously noted, slips and lapses hardly qualify as being learning experiences and therefore are not considered as contributors to the development of workplace expertise.

Tasks that require rule-based solutions are governed by stored rules of if-then actions or diagnosis. Errors at this level (lapses, errors, and mistakes) are typically associated with the misclassification of situations leading to the application of the wrong rule or the incorrect recall of procedures (Reason, 1990). In general, rule-based errors are the result of the misapplication of good rules or the application of bad rules. Rule-based errors can be seen as failures of expertise.

Tasks that require knowledge-based performance and solutions represent novel situations where actions must be planned on-line using conscious analytical processes and stored knowledge. Feldman (1986) would identify these tasks as being of an intuitive nature requiring the cues received to be weighted, correlated, and combined in an attempt to select a solution. Because there are no accepted organizing principles, and the correctness of intuitive solutions are subjective, errors occurring at this level arise from resource limitations and incomplete or incorrect knowledge reflecting a lack of expertise (Reason, 1990). Knowledge-based errors reflect a lack of expertise and thereby suggest that they represent the kind of experiences that provide the greatest opportunity for the development of workplace expertise.

Conclusions and Implications

There is research to indicate that workplace expertise is predominately developed on the job through the experience of having to successfully perform the tasks and make the decisions related to a specific job. However, it is recognized that not all experiences (many of them being repetitive in nature) contribute to the development of workplace expertise. Marsick and Watkins (1990) have proposed that, in the workplace, people learn most effectively through interactions with others when the need to learn is greatest. Feldman (1986) has stated that in order to realize that learning is necessary one must notice errors. Errors, as a general term used by researchers to describe incorrect decisions and inappropriate actions (which clearly serve as an indication of a potential need for learning) result in, or are representative of failure. Experiences of failure thus appear to represent the greatest opportunities for developing workplace expertise. This possibility carries with it several implications for the field of HRD, each stressing the need for a deeper understanding of failure and the role it actually plays in the development of workplace expertise.

Although there has been extensive research conducted in the study of human error, it is not apparent that any of this research has either directly or indirectly considered the role failure plays in learning. As Marsick and Watkins (1990) have suggested, in regards to the informal learning that occurs in the workplace, people do not always learn from their experiences and often times what is learned in this manner may reinforce inaccurate ways of doing things. The implication of this is twofold. First, there is a need to be able to identify the job-related experiences that are supportive of learning from those which are not. Second, that the use of experiences, which are based on failure, may have to be structured in their presentation to ensure that they constructively support the development of workplace expertise.

According to Nierenberg (1996) and Reason (1990), individuals are prone to error and they spend a considerable portion of their time preventing, detecting, and correcting errors. Marsick and Watkins (1990) have submitted that learning from and through experience is representative of the way in which people make sense of the situations they encounter in their daily lives. One of the indirect outcomes of the research on human error is the classification of failure. Based on cause and consequence, several different types of failure have been characterized. According to Rassmussen (1987a) the greatest number of human errors are attributed to slips and lapses, or errors associated with the subconscious execution of well-established procedures and actions. It is unlikely that experiences of failure of this nature hold any significant meaning to us as individuals, for as Feldman (1986) noted, "learning from experience may be said to occur when an inaccuracy in prediction is made salient and the resultant feedback is usefully encoded" (1986, p. 268). We appear to pay little attention to slips and lapses, if publicly made simply we excuse ours oversight, make the correction, and continue on with whatever we were doing.

In contrast, human errors specific to failures of conscious intended actions and decisions are attributed to either a failure of expertise or the lack of expertise. In all likelihood these experience of failure do have meaning to us. The question of importance is to what extent does failure of this nature contribute to the development of workplace expertise. Not only is this relationship unclear but it implies that there are very specific experiences of failure that support the development of workplace expertise.

Based on the proposition that people learn most effectively through interactions with others (Marsick & Watkins, 1990), an additional question is raised regarding how much of what we is learn is the result of the observation, and the awareness, of the failures of others.

It is clear that failure does play some role in the development of workplace expertise, what is unclear are the related questions of what, where, why, when, and how and is alone emphasizes the need for extensive research. For the HRD professional in general it is evident that there is a need to develop a deeper understanding of failure as a learning experience. For the HRD professional specifically involved in the training and development of an organization's employees the implications of learning from failure are significant when failure is viewed as a tool for developing workplace expertise.

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When Caring is Not Enough: Competencies Needed by Service Providers

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The purpose of the study was to identify competencies needed by those providing service to today's customers. A total of 356 service providers were interviewed from 31 different organizations throughout the U.S. Based on 2176 critical incidents, five major factors were identified to create the SERVE model: ***S****ee the "big picture" and how customer service fits into it;* ***E****stablish an authentic human connection with each customer;* ***R****ender timely, accurate and thorough service;* ***V****alue and respond to unique customer needs; and* ***E****xtend a hand to repair and strengthen relationships with customers who are upset or angry. Implications were discussed for HRD practice and future research.*

Theoretical Framework

Organizations recognize the importance of customer relationships, customer satisfaction, and customer loyalty (Band, 1989; Bleuel, 1990; Hart & Johnson, 1999; Iacobucci, Grayson, & Ostrum, 1994; Jevons & Pidgeon, 1999; Parasuraman, Zeithaml, and Berry, 1985, 1988, 1991). Patterson, Johnson, and Spreng (1997, p. 4) suggested that increased interest by academicians and practitioners in the topic results from "... the fact that a satisfied customer is viewed as an indispensable means of creating a sustainable advantage in the competitive environment of the 1990s." Furthermore, Reichheld, et al (1999) indicate that simply satisfying customer demands is necessary but not sufficient to win their loyalty in highly competitive markets.

Given this interest in customer satisfaction and loyalty, we might expect a rich literature on customer service competencies. Indeed, identifying such competencies could contribute to selection purposes, training and development, and performance management (McClelland,1973; Russ-Eft, 1995; Spencer & Spencer, 1993; and Spencer, 1997).

Although much practitioner and academic literature has been devoted to customer concerns, relatively little work has focused on the competencies needed by customer service providers and others within organizations to win and maintain customer loyalty. Models of customer service competencies appear or can be gleaned from the following: Berry, Parasuraman, and Zeithaml (1994), Bhote (1996), Bitner, Booms, and Tetreault (1990), Corcoran et. al. (1995), Learning International (1991), Levesque (1995), and Zemke (1995). Based on these models, all of which were developed in the late 1980s or early 1990s, the following competencies emerged as common across the various reports: (1) listening and communicating, (2) being reliable, consistent, and dependable, being respectful, courteous, and fair, and (3) solving problems. Note, however, that only the Berry et. al. (1994), Bitner et. al. (1990), Corcoran, Petersen, Baitch, & Barrett (1995), and the Learning International (1991) studies were based on primary data collection; the first used various focus groups and surveys of customers and interviews of customer service personnel; the second used critical incidents gathered from customers; and the latter two used interviews of managers and customer service personnel or sales personnel.

As organizations enter the 21st century, changes are occurring which may affect customer service. For example, some e-business companies are now beginning to provide "live" people for customers to interact with online or by phone (Mandell, 1999). To determine the nature of new challenges facing customer service, Russ-Eft (1998) undertook a survey of organizational decision-makers and identified four tough business challenges facing the customer service function.

- The customer's need for value balanced against the shareholder's need for profit
- The customer's need for special attention balanced against the manager's need for productivity
- The organization's need to appeal to more "profitable" customers balanced against its commitment to serve all customers

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- The customer's new demands balanced against the organization's ability or willingness to meet those demands

Successful organizations will be the ones that can turn these apparently "either/or" conundrums into "both/and" solutions in which everyone wins: the customer, the provider and the organization.

Research Questions

Given the changes in organizations and the challenges facing the customer service function, the research questions are: What are the customer service competencies needed in today's organizations? To what extent are the same competencies identified by customers, customer service personnel, and other employees within organizations?

Methodology

Subjects. A stratefied, random sample of 40 different North American organizations, based on industry and geographic location, were contacted for their participation. Of the 40 organizations, 31 agreed to participate in the data collection. These 31 different organizations came from the manufacturing, high-tech, service, government, energy and health-care sectors. Each organization was asked to provide the names of at least 10 people who had direct contact with customers. A total of 356 interviews were completed.

Data collection approach. Interviewers used the critical incident approach, in which respondents were asked to recall incidents when they or someone else provided good or poor customer service. All respondents were asked to provide two positive situations and two negative situations. Examples of the basic questions were:

Think of a time in the past month when you or someone else provided outstanding customer service.

Think of a time in the past month when you or someone else failed to meet the needs of a customer.

All respondents were then asked to describe the situation, what the provider did, what results the behavior produced, who was involved and how the customer reacted, and what were the results. These data were gathered in 30 to 40 minute telephone interviews.

The power of the critical incident methodology is that it asks people for top-of-mind recollections—customer service interactions that made enough of an impression to be memorable, either positively or negatively. It does not ask people what they think customer service should be or which customer service skills they think are most valuable. The result is a series of often small but telling moments which, taken together, define the realities of good and bad service. From all these "candid verbal snapshots" it is possible to distill what people like—and don't like—about customer service, and potentially what affects customer loyalty. (See Russ-Eft, 1995, 1999 for more discussion on the use of the critical incident method.)

Analysis. The responses to each question were entered into a database (using ACCESS) along with information identifying the characteristics of the participants, such as type of industry and position of respondent. Each incident identified as "critical" by the respondent, or judged by the analyst as so intended, was considered as a separate event. If a response included more than one incident, duplicates of the entire response were entered as separate incidents. For example, a response might involve a specific type of service problem and the intervention of the manager. Such an incident would be coded as two incidents: (1) the service problem and (2) manager intervention. This procedure permitted the analyst to review the different incidents for classification purposes, while still being able to identify the entire response.

Analysis of the incidents followed the guidelines set forth by Flanagan (1954, 1974) and detailed by Russ-Eft (1995, 1999). Two experts with over five years of experience working in or consulting with customer service functions undertook the independent check on the categorization for this analysis. Note that the critical-incident methodology does not involve a statistical analysis of a representative sample. The purpose is to uncover the full range of critical attributes that comprise service to customers.

Results

More than 2,100 individual customer service incidents were collected using this methodology. They were first grouped into 85, then 53, then 19 subcategories of behaviors. They then were grouped into five customer service factors that represent the core of customer service: **S**ee the "big picture" and how customer service fits into it; **E**stablish an authentic human connection with each customer; **R**ender timely, accurate and thorough service; **V**alue and respond to unique customer needs; and Extend a hand to repair and strengthen relationships with customers who are upset or angry. Table 1 presents a description of the five factors.

Table 1

Description of Customer Service Competencies

Competency	Number of Incidents	Description
See the "big picture and how customer service fits into it.	342	Understands organizational, customer; personal/job consequences; helps, trains colleague; compensates for colleague's error, failure or absence; fixes product or system; develops new system.
Establish an authentic human connection with each customer.	265	Avoids phone frustration; calms upset customer; makes customer feel valued; acts with patience; provides friendly, courteous service.
Render timely, accurate and thorough service.	880	Gathers information; listens; helps customer through the process; thoroughly explains services/procedures; keeps customer informed; follows up; solves problem; finds alternate product or service; expedites request; takes action that was the responsibility of other departments; provides complete and detailed service.
Value and respond to unique customer needs.	459	Bends rules involving information, price or fees, procedures, warranty/insurance; accommodates special need or request; responds to urgent request; works off-hours to complete request; gives extra service beyond those contracted; does a kind act; fixes a customer's mistake; provides extras.
Extend a hand to repair and strengthen relationships with customers who are upset or angry.	230	Recovers by speeding up process, payment/price accommodation, giving special attention, fixing the problem; replacing product/service, having manager solve the problem; goes outside organization to help customer; calls another organization to complete own job; helps confused customer who called the wrong organization; refers customer to competitor or other service.

Our research shows that these factors capture all of the service behaviors or competencies, which produce the types of positive, memorable interactions that help create or maintain customer loyalty. They include the basic interpersonal competencies that are traditionally part of customer service, along with competencies that require the provider to take a more strategic,"big picture", view of his or her role. Note that the distribution of positive and negative incidents can be considered immaterial for development of the competency model. All of these behaviors and factors are critical for customer service. Positive incidents point to important behaviors that are needed; negative incidents point to behaviors to be avoided.

Table 2 presents a different break-down on the data appearing in Table 1. Specifically, Table 2 shows the number of incidents as reported from the perspective of customers, customer service providers, and others (such as sales personnel, nurses, and technicians).

Table 2
Customer Service Competencies by Reporting Perspective

Competencies	**Customer**		**Provider**		**Other**		**Total**	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
See the "big picture"	3	1%	274	21%	65	17%	342	16%
Establish human connection	114	25%	108	8%	43	11%	265	12%
Render service	226	49%	512	38%	142	37%	880	40%
Value and respond	60	13%	312	23%	87	23%	459	21%
Extend a hand	55	12%	128	10%	47	12%	230	11%
Total	458	100%	1334	100%	384	100%	2176	100%

Discussion

See the "Big Picture" and How Customer Service Fits Into It.

This factor energizes service providers to take action in the growing number of customer interactions where policies and procedures fail to offer guidance. Providers who adopt this strategy see themselves as business owners. Because they have a long-term perspective, they are willing to provide extra service even if there are no immediate short-term results, because they understand that their extra efforts will pay off in the long run. However, it should be noted that customers do not tend to report on such incidents (only 1%), perhaps because they do not see or recognize the system issues.

Providers with a business owner attitude found ways to build customer loyalty by helping their "co-owner" colleagues. One respondent described a meter reader who left his normal route and spent an hour of his time with a fellow meter reader who was helping a customer un-jam a rock from a sprinkler system.

Some providers identified and resolved situations that needed fixing. For example, a service rep at an insurance company realized the company's system made it difficult for customers to track their losses and premiums, and took the initiative to suggest and implement adjustments to the system.

One provider observed a situation where an untrained associate brushed off a customer. She took action by bringing up the need for better training in a meeting. "I am sure it will start a discussion about how we can handle this differently in the future."

Unfortunately, in many more examples, providers reported being blocked in their attempts to make improvements. In one case, a service rep felt that the company's return policy was unfair but did not think that it would change. "The customers are often misinformed. I feel for them, but I feel limited— cut off. I can't help them. ... They will probably spread the bad news about us."

Establish an Authentic Human Connection With Each Customer.

One of the most surprising findings in this study is how very differently customers and service providers value "the human connection." Customers are three times more likely than providers to recall the human element in a transaction (25% of customer incidents as compared with 8% of provider incidents). Perhaps because service providers are employed to provide good service, they tend to focus on the business side of the transaction. In contrast, when customers feel unsure of themselves, they tend to remember providers who help them feel competent and significant.

There were many examples of making customers feel valued from hotels, restaurants and other industries in which customers recalled interactions characterized by unexpectedly delightful little extras. For example, a woman had a very basic transaction with a phone rep at a catalog company. "She answered promptly, didn't put me on hold and was very pleasant," the customer said. "I had that warm, fuzzy feeling talking to her."

Sometimes a friendly tone of voice seemed to make all the difference. "While I was in the market for life insurance many years ago," a respondent reported, "I had a wonderful experience with an agent. It was only on the phone. Her voice was positive, upbeat and she sounded as if she genuinely cared about my questions. I've since had positive experiences with this company and must have recommended them to over 200 people."

To do this well, providers needed to maintain their own emotional readiness (e.g., Ashford & Humphrey, 1993). Although it may be easy to establish a human connection when you feel like it, service providers must do it on demand. As one respondent said, "You really have to leave your life behind when you face the customer."

Many of the negative critical incidents suggested a lack of emotional readiness, although few as openly as the following classic example: "Early one morning, I got a call from someone who was really curt," said a financial services rep. "He wanted to have everything his own way. He asked for a $15 adjustment to his account and, when I said I couldn't do that for him, he wanted to escalate his request. Unfortunately, I hadn't even had my coffee yet. I told him I wasn't in the mood— and hung up."

Render Timely, Accurate and Thorough Service.

This strategy sums up the core of what customers want from service providers: timely, accurate, and thorough service. Indeed, all three groups, customers, providers, and others supply the most incidents in this factor. Successful service providers seem to act as knowledgeable guides—men and women who help customers avoid problems, find the best deal, and who take the time to work through a maze of often complex regulations and choices (particularly mentioned by customers in the banking, utilities and insurance industries.)

Successful providers listened and explained knowledgeably and patiently. By providing a thorough explanation, a medical technician was able to alleviate the apprehension of a patient who had an X-ray. "Before the test, I was apprehensive and jittery," the patient said. "After the medical technician explained things to me, I felt safe. I feel that I can now explain the test to others and make them feel less nervous."

Providers gave customers alternatives, if needed. Instead of just saying "no" when they did not have what customers want, effective providers used their expertise and creativity to come up with alternatives. For example, as an alternative to a loan a customer did not qualify for, a vice president for underwriting found another loan that satisfied the institution's guidelines and met the customer's needs.

Providers knew how to speed up the process and found short cuts, such as:

- Walk a request through each step of a process to get something delivered overnight that had already taken two weeks—and then call to confirm its arrival.
- Get an insurance policy quote to an agent in two days, when such a request usually takes two months. (Ideally, this example should prompt the insurance company to take another look at the quote-production process.)

Effective service providers kept the customer informed—even if there was no progress to report. For example, a Chicago passenger on a delayed flight to San Francisco appreciated being kept informed about what was going on. "They kept talking to us, and they were honest. I took them up on their offer to put us on a flight to San Jose. When the plane took off, the pilot gave us free headsets so we could all listen to the Cubs game. Every airline employee seemed able to make decisions in our best interest. I'd pay extra to fly with this airline in the future."

Sloppy, inaccurate service topped the list of negative incidents for this strategy. Sometimes the problem seemed to be simple laziness, as in the case of the counter clerk who told the owner of an impounded car that he didn't have the documents he needed to release it—when they were underneath the counter all along. In another incident, a technician had to come back a second time to fix a meter, because he had neglected to check his work the first time.

Value and Respond to Unique Customer Needs.

Many of the customers in the critical incidents needed—and/or asked for—special treatment. In some cases, their need stemmed from cultural or language difficulties, age, physical limitations, or tough financial circumstances. Sometimes their "premier customer" status warranted special treatment. In other cases, they wanted the rules bent to accommodate their failure or unwillingness to follow the rules. Finally, some customers asked for special treatment without any specific justification. These are the times when it is most challenging to integrate what the customer wants with what the organization can provide, and when service providers most need the skill of saying "no" gracefully.

The positive incidents (74 percent of the total for this factor) painted a picture of highly responsive service providers willing to go to almost any length to meet these needs. They became tenacious problem-solvers, doing everything they can to get customers what they need.

Positive incidents showed providers who gave of their own time:

- A team of technical service reps at an airline manufacturing company spent 13 hours, including most of one night, troubleshooting a problem.
- A cashier at a city government office stayed after work so a customer who came in late could pay off her parking tickets and get her vehicle registered.
- A service rep at a mail order prescription company personally drove a refill to a customer who couldn't wait the two weeks it would have taken for delivery by mail.

They "bent the rules" on behalf of the customer, as in the following example. A utility company employee: "A customer had just moved into her home. Normally, customers need to place a deposit for new services before they can get their lights turned on. Since the customer was elderly, we turned her lights on right away, and we waited for the deposit."

In at least one instance, a service rep expressed the concern that today's extra effort could become tomorrow's "business as usual". When a customer requested a part for his airplane, the manufacturing rep drove to the plant, picked up the part, had it inspected, delivered it to the airport, and placed it on the plane. "The only bad thing," the rep said, "is the customer might expect this from now on. It's kind of a double-edged sword."

Many negative examples centered on systems that were seen as inflexible and stupid—by the customers as well by the service providers. For service providers, examples like the following created feelings of helplessness, empathy for the customer, and resentment at being placed in untenable situations. "A customer received a $25 water bill for a vacant apartment. I explained that was the base rate for having an account with us, whether any water is used or not. The customer was very hostile and upset. He said he would write the utilities commission and complain about me, even though I must follow the company's policy."

Extend a Hand to Repair and Strengthen Relationships with Customers who are upset or Angry.

A service provider uses this factor when the customer is angry or upset because of a mistake the organization has made. It also can come into play when the customer is extremely upset, even though the organization is not at fault. It stands out as one of the most powerful creators of customer loyalty; when it's performed well, the customer relationship is not only "recovered," it is also made stronger than before the problem occurred.

Successful providers accepted full responsibility. The following incident showed how to recover a customer relationship and create a positive story to replace a negative experience. A woman used her local florist to order flowers for someone in another city. The florist at the other end botched the job, but when the woman called to complain, that florist refused to take any responsibility. The woman then called her own florist to warn against using that shop again. "My florist stepped in and turned the situation around," the woman said. "She ordered a new arrangement at her cost and made sure it looked good. She will definitely get referrals from me."

Providers made gestures of atonement when appropriate. These "extras" seemed to serve a combination of functions: (1) they stand as tangible proof of exactly how much the organization values the customer; (2) they indicate their receptivity to customer feedback; and (3) they underscore the organization's plea for the customer not to defect. It would be interesting to know how much these gestures create subliminal customer guilt—enough to bind them a little more closely to the organization.

Providers acted quickly to restore customer confidence. In addition to making up for problems or embarrassment, service providers also needed to show that their organization's product or service is worthy of continued use. In one example, a securities company manager spelled out the specific long-term benefits of restoring customer confidence. One of the company's biggest customers was a busy physician who was irate that he could not get online in the evening to do his trading at home. The manager quickly tracked down the problem, got him technical help and alerted the evening manager to call him at home whenever he was having problems. "He has turned out to be a pussycat," the manager said. "He has become a lot more forgiving of things. He is more ready to see solutions, not problems."

Many critical incidents described completely botched or partial recoveries:

- A company forgot to enter an order for a part a customer needed for some work that had to be finished very quickly. The company ended up having to reduce the price of the part and pay another company to perform the work, thus losing thousands of dollars. When all was said and done, the customer was still angry.
- A customer forced to wait for a reserved car received an apologetic phone call from the agency a few days later. The customer's reaction? "The upshot is I am not as negative about the company as I used to be. I will use them

again." The bottom-line for the company? They retained a customer, but not a very enthusiastic one.

Implications for Practice

Customer service does not exist for its own sake. While the overall impact of the SERVE factors is to create customer loyalty, they also produce bottom-line payoffs. For example: Zeithaml, Berry, and Parasuraman (1996) examined the behavioral consequences of service quality and linked these to sales and customer retention. In a specific case, as described by Stuller (1999), Powell Taylor, who created the GE Answer Center in 1981, reported that GE looked for people with certain personalities and social graces. Such service employees soon learned that a well-handled customer call opened an opportunity to sell more products. Also, Tucker (1997) indicated that the lifetime value of a pizzeria customer is $8,000; a supermarket customer, $380,000; a General Motors customer, $400,000. And selling to existing customers is far more profitable than selling to new ones.

As a result, HRD interventions to improve customer service competencies and processes present critical business initiatives. The SERVE model provides a starting point for determining training and development needs. Rather than presenting a merely theoretical model of customer service, it is based on actual customer-provider interactions. Thus, it can be used as the basis for developing needed training indicating behaviors leading to success and behaviors leading to failure. Also, positive and negative incidents can be used to develop scenarios for skill practice and assessment center situations.

Implications for Further Research

The present study represents a next step in defining customer service competencies beyond those previously identified and described in the "Theoretical Framework" section. One extension of the present research would be to compare competencies emerging in different industries and different positions. Also, customers and those providing service to customers exist throughout the world. Whether these same competencies appear or are as critical in other parts of the world needs to be examined. Indeed, the Jevons and Pidgeon (1999) comparing service quality in Vietnam and Australia did identify some important differences. Future research would extend this data collection effort to other countries and other continents.

The results of the present work can be used to design and validate instruments to measure the competencies. Such research would, in addition, provide some further validation of the factors in the SERVE model.

Evaluation of an HRD intervention to improve service to customers provides another line for future research. Using the critical incident method, validated instruments and/or other data collection approaches, the evaluation can examine the process for the intervention as well as the impact of the intervention. Finally, another area of research would involve an investigation of the business challenges identified at the beginning of the study. To what extent do providers recognize these challenges? To what extent are they able to resolve them? And, what are the successful and unsuccessful ways in which they deal with these dilemmas? Such research would help to expand the usefulness of the SERVE model.

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Self-Directed Learning for Supervisory Development

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Ongoing change in organizations has resulted in the need for self-directed, resilient workers and renewed attention to self-directed learning. This study looks at what research says needs to be in place to engage workers in self-directed learning and help them understand how such learning can strengthen their individual performance. Results showed a focus on better self-understanding was useful, but that the literature did not sufficiently emphasize the need for connections between self-directedness and job performance.

Keywords: Self-directed learning, Self-directed workers, Supervisor development

The rapidly changing business environment has created the need for self-directed, resilient workers who can and do take control of their own learning and development. Such workers have recently been dubbed 'free agent learners' (Caudron, 1999), renewing interest in the aspect of adult learning referred to as self-directed learning.

Problem Statement and Theoretical Framework:

Guglielmino & Guglielmino (1988) name several factors from the changing work environment that could serve to promote the need for self-directed learning in business and industry:

- the impact of the information explosion and the resultant need for workers to manage the volume of such constantly changing information
- the fact that workers face, now more than ever, the danger of obsolescence and technological displacement if they don't find ways to continually learn
- companies wanting more worker involvement, which has strong connections to an environment that would support self-directed learning.

Earlier research by Schreier (1984), and more recent research by Long and Morris (1996) shows that organizations appear to be taking the need for self-directed learning seriously. Long and Morris found almost sixty articles and papers, published between 1983 and 1993, on self-directed learning in business and industry. They concluded that self-directed learning was increasingly becoming a part of the workplace.

The concept of self-directed learning has been defined and described in a number of different ways (Brookfield, 1988; Candy, 1991; Knowles, 1975; Long 1988; Tough 1979). Caffarella in Brockett et al (1994) feels that for the research agenda on self-directed learning to move forward, some grounding is necessary for these diverse theoretical perspectives. She has identified three key themes from the literature for this purpose:

"1. recognition and examination of processes through which learners engage in self-directed learning,
2. definition and debate regarding the salient characteristics and preferences of adult learners, and
3. identification of ways to foster initiative and learner control in formal institutional settings" (p. 428).

Past research has looked at aspects of each of these themes. There has been a significant amount of quantitative research on the nature of adult's self-directed learning projects (Tough, 1979) and on the identification and measurement of self-directed learning attributes (Long and Redding, 1991). There have also been more recent qualitative studies. Cavaliere (1992) has used the analysis of case studies to better understand conceptual learning processes in self-directed learning. Kops (1993, 1997) used semi-structured interviews to look at the self-directed learning efforts made by managers in public and private sector organizations to try to identify the influence of company policies and practices. Most of this research has looked at situations in retrospect—after the worker is involved in self-directed learning (Kops, 1997; Tough, 1979) or as case studies of existing self-directed learning efforts in organizations (Gould, 1997; King, 1996).

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Given the previously identified need for more self-directed, resilient workers in organizations, the problem is the lack of research that looks at how to begin this process, that is, how Human Resource Development professionals might design a process to introduce workers in a traditional, hierarchical organization to the concept of self-directed learning and encourage them to make greater use of self-directed learning for their development and improvement of their job performance.

Research Questions

How can Human Resource Development professionals design a process that will enable supervisors, in a traditional organizational setting, to become self-directed learners for their ongoing development, thus strengthening their individual performance and their contribution to the organization for which they work?

What should the design of the process include?
How can supervisors be encouraged to engage in self-directed learning?
How can supervisors better understand their own development needs?

Organizational Setting

The company is a major electric and gas utility in the northeastern U.S. It is currently going through state-mandated deregulation, necessitating restructuring of the business lines and a shifting theory of the business. With the move away from a regulated, "cost plus" business comes the need for long term employees to change their worldview and acquire new competencies. The organization has traditionally attracted security-minded individuals seeking lifetime employment. Though they are well aware of the fact that the rules of the game have changed, and can articulate this fact, they are still unsure of what new behaviors will be required of them.

The company's former leadership development process, though recently designed, had a fairly traditional, skills-based focus with an emphasis on traditional supervisory skills. In 1999, a learning strategy was developed for the organization that focused on building self-awareness and the ability to be more deliberate about learning from day-to-day experience. The integration of a new model of career management with learning, as well as greater differentiation between training and learning, were critical aspects of the strategy. Based on this, a new leadership development process was designed with participants being introduced to the concept of self-directedness, with self-awareness being key to understanding themselves and those with whom they work.

Methodology

Study Population

The pilot for this new process included 12 first line supervisors with a minimum of one year of supervisory experience. Among the 12 participants there was diversity in age, gender, race and length of service. All participants had at least five years of service. All participants were not able to attend the full process.

Data Collection and Analysis

This was a two-part study. The first part of the study was a review of the relevant literature (Danis & Tremblay, 1988) to identify the important concepts that needed to be included in a process that would encourage supervisors to be self-directed in their development. Some of the research included what makes some learners self-directed and others not (Guglielmino & Guglielmino, 1991; Long & Redding, 1991); how people can be developed to become self-directed learners (Clardy, A., 1998; Guglielmino & Guglielmino, 1988); and the results of attempts to institute self-directed learning within other varied organizations (Baskett, 1996; Strickland, 1996).

A content analysis was performed on this review (Weber, 1990) looking for concepts that consistently appeared throughout the literature. Based on the outcome of this analysis, a process was designed to introduce supervisors to the use of self-directed learning for their ongoing development. The process included two 2-day sessions spaced one month apart, a two hour 1-1 360 feedback session, and a two hour learning group session.

The second part of the study used evaluation feedback surveys and semi-structured interviews to determine how well the developed process worked, how well supervisors had understood their own development needs, and how self-directed they were in meeting those needs and improving their performance.

Analysis of this data was done using a descriptive framework derived from the areas identified in the literature review (Robson, 1993). This descriptive framework was inclusive of the topics covered in the design of the four-day plus process.

Findings and Discussion

The process for helping supervisors become self-directed was designed and piloted in the summer and fall of 1999. The design of the process is illustrated in Table 1.

Table 1 – Self-directed Development Process

Day 1	AM Introduction and ice-breaker 21st Century Workplace Know your Skills - Part I	PM Know your Skills - Part II Invest in your Values New Employment Relationship Business Competency Model
Day 2	Learning Styles – Part I	Learning Styles – Part II Self-directed Learning 360 degree Feedback Orientation
Day 3	Myers-Briggs Type Indicator – Part I	Myers-Briggs Type Indicator – Part II 360 degree Feedback
Day 4	Development Plan	Development Plan
Follow-up	Two hour 1-1 360 Feedback Session	
Follow-up	Two hour Learning Group Session	

Table 2 shows the findings from the literature review analysis, how those findings were translated into elements in the process, and the results from the surveys and interviews about the process including participant comments.

Table 2 – Results of Process

Findings from Literature Review	Design Elements of Process	Results from Surveys and Interviews Including Participant Comments
Self-direction in learning does not necessarily mean learning alone. (Allen, 1997). The learner should be able to interact with a facilitator/teacher and other learners (Brookfield, 1985; Heimstra, 1994).	Two 2-day sessions attended by 10-12 participants and led by two facilitators. Icebreaker to allow 1 – 1 discussions among participants focusing on the strengths they possessed.	The format of the icebreaker served the purpose of creating an atmosphere where learners felt comfortable in working together. The content began the start of the focus on self-assessment of skills. "Good icebreaker, the more I talked the more good points I identified with."
The learner may not be able to initially assess his/her own needs (Allen, 1997). Some of the needs to be assessed in connection with the process should focus	Participants used several instruments, with help from the facilitators as needed, to self-assess and develop a better understanding of themselves and their	

on a high level of self-understanding. This can include assessments of personality type and personal values—determining if they are congruent with organizational values (Bagshaw, 1997; Walker & Long, 1997). Management and job related skills also need to be assessed (Kops, 1997).	needs. In addition, there were exercises used to deepen self-understanding. Data gleaned from all these sources was used to create a development plan.	
	Know your Skills	There was some confusion with the skills' assessment, but participants felt they learned about skills they possessed, how the skills were being used, and what needed further development. "I learned what skills I need to improve my self-worth."
	Invest in your Values	The values' assessment was considered extremely useful for both ongoing self-development as well as an understanding of other's differing values. "I'll use this information everyday to improve myself and my department."
	A business competency assessment tool was introduced so that participants could also ascertain their "hard skill" needs.	While some participants felt they had previously received similar information, they found it useful. "This model let me step back and take a better look at things."
	The organization's 360 degree feedback process was employed as yet another instrument for raising self-awareness, in this case, in relation to the organization's espoused values.	Initially, the 360 degree feedback process, which is relatively new to the organization, generated the most concern, due to issues with confidentiality and discomfort with receiving feedback, but all were willing to try it. "I'm not enthusiastic about receiving feedback, but will see how it works out." Once the feedback was received, participants recognized its value to their development. "It identified those areas of concern to be addressed."
	Myers-Briggs Type Indicator	As with other assessments, the MBTI provided insights about not only themselves but others as well. "Helps me understand individuals as to why they act/react to various issues the way they do, allowing me to respond in a manner they are more receptive to."
It is important for learners to understand their learning style preferences (Clardy, 1998). There appear to be links between different learning styles and how much	Participants used a learning style assessment, with help from the facilitators as needed, so they would better understand how they learn. In	Participants felt the process helped them to identify their own areas of strengths and areas for development. "It gave me a

individuals will benefit from, and adapt to, self-directed learning (Brockett & Heimstra, 1985; Caffarella & O'Donnell, 1988).	addition, there were several exercises used to address differences in styles. The result of the assessment was used in helping to create a development plan.	direction where to start and where to place the most emphasis." Equally important, it helped them understand there are differences in how people learn. This has affected their style of teaching/coaching subordinates as well as understanding why certain learning situations are more valuable to them than others.
Learners have varying degrees of readiness for self-directed learning. It may be possible to assess/predict readiness through instruments. Differences in readiness should be addressed through training to increase readiness and differences in strategies used with learners (Brookfield, 1988; Caffarella & O'Donnell, 1988; Guglielmino & Guglielmino, 1988; Heimstra & Burns, 1997).	Participants used a self-directed learning assessment, with help from the facilitators as needed, so they would better understand where they were on the continuum of self-directedness. The result of the assessment was used in helping to create a development plan. In addition, there were several exercises used to help increase readiness.	The assessment began to help participants understand the concept of, and the need to develop skills for, self-direction. "I am not a very strong self-directed learner, but that can be improved." Only a few participants, however, were also able to make the connection between being self-directed and strengthening job performance.
Having an individual development plan helps provide a clear sense of direction for the learner (Kops, 1997). To develop and carry through on development, learners need access to more flexible, non-traditional forms of learning. They need ideas for development opportunities and non-training experiences. They need time to develop and the empowerment to act (Bagshaw, 1997; Clardy, 1998).	Participants created an individual development plan with help from the facilitators as needed. This plan was later reviewed with the participant's manager for additional input. A comprehensive resource guide of traditional and non-traditional development experiences was provided to each participant.	Participants noted how much information went into actually formulating a development plan. Traditionally, they were told or chose to attend something because it was included in a goal and not because they had a specific need to address. Also, what they learned and how they learned it was the decision of their manager. "Now I know that I don't learn the same way he does and I can explain why I need to find a different way to acquire the skills my manager wants."
The learner should understand and 'buy-in' to the need for self-direction (Clardy, 1998; Kops, 1997; Strickland, 1996).	In discussion of the need to be self-directed, organizational as well as individual, rationales were presented. Topics included setting a context through discussion of the 21st century workplace needs and a new employee relationship with the organization.	Participants felt they learned intellectually about 21st century workplace trends. Many felt that connections from these trends to their development needs, individual work lives, and job performance were not clear. "I have an understanding of the trends, but what are the priorities?" Participants understood their new relationship with the company involved dealing with constant change and that there is a need for continual learning to keep up with that change. "There are no roadmaps, one must continue to develop those skills required to meet ongoing changes."

		Some participants expressed that the process did not meet their expectations. Others indicated they were sent to the process by their managers without understanding what the process was about. "My expectations not met. I wasn't sure what the class was about."
The organization needs a clear vision of its requirements for self-direction. It needs to strongly support development and the self-directed effort and see development as wider than the present job. Top management needs to be viewed as paying attention to learning and as role models (Baskett. 1993; Clardy. 1998)	This area was not explicitly addressed in the process.	Some participants expressed concern about the lack of management support. "I hope my manager understands the importance and the need to attend this class." "The 360 degree feedback shows that my manager is the only person who sees certain behaviors as developmental needs --- he and I obviously need to talk about that – but how?"

The findings from the pilot have indicated both strengths and weaknesses in the design of the process. Strengths included the emphasis on self-assessment and self-understanding through such tools as the 360 degree feedback process, Honey-Mumford Learning Styles Questionnaire (Honey & Mumford, 1995); The Learning Preference Assessment (Guglielmino & Guglielmino, 1991); and the Myers-Briggs Type Indicator (Myers, 1998). These assessments were all valued by participants because they provided not only self-assessment, but also additional insights into how supervisors relate to and manage their employees.

The 360 degree feedback and the MBTI were repeatedly named as most valuable during the interviews. The 360 degree feedback was seen by participants as most valuable because it directly related to behaviors upon which their performance is evaluated. It also provided multiple perspectives of their skills and abilities. The MBTI was most valued because it provided the greatest understanding of why they are who they are, and gave them similar insight into others.

Weaknesses included a need for greater emphasis on the connections among value-added job performance, self-directedness and self-directed learning. While participants understood the concept of self-directed learning, few made the explicit connection between their ability to improve their job performance, their contributions to the company and self-directed learning. They saw it as a way to gain some control over their time and learning. "I am most productive when I am in control of my time and resources", but they did not connect self-directedness with the way they would need to deal with future organizational changes. Some participants continued to feel that they needed more traditional training to meet their needs. "Would like training, some communication skills".

An additional weakness was found because the needs for strong organizational vision and support were not explicitly addressed in the process. The learning strategy discussed earlier in the paper was not fully communicated. Also, sponsorship in the organization is not considered to be philosophical. Participants in a program need to see the actual presence of a sponsor and this was missing from the process. As a result, participants expressed concern about possible lack of management support.

Drucker (1999) says that knowledge workers face drastically new demands in the 21st century. Some of what he says reinforces the needs of our self-directed, resilient supervisors:

"1. They have to ask: Who Am I? What Are My Strengths? How Do I Work?

2. They have to ask: Where Do I Belong?

3. They have to ask: What Is My Contribution?" (p. 164).

Despite some of the weaknesses, initial findings demonstrate that the literature and research on self-directed learning can provide a good basis from which organizations can draw to design processes that will foster and encourage self-directedness. Self-assessment can help these supervisors answer Drucker's questions of "Who am I? and What are my strengths?". Supervisors from the pilot have begun creating and implementing detailed, focused development plans which can help them determine "Where do I belong? and What is my contribution?".

To strengthen the process, additional emphasis needs to be placed on being explicit about how being self-directed is connected to a supervisor being able to strengthen his/her individual performance and contributions to the organization. In addition, the organization needs to get clearer about its support of supervisors acting as self-directed, resilient employees. It needs to provide more explicit communication about its vision for these employees and more active sponsorship of their efforts.

Contributions to HRD

Human Resource Development professionals can feel confident in drawing from existing research for their work in developing self-directed, resilient supervisors. It is important, however, to have a strong focus on the rationale for using self-directed learning as a means to this development. For supervisors to devote the time to self-directed learning, it cannot be viewed as an end in itself. It needs to be viewed as a means to self-directedness and resiliency—the end result being a self-managed knowledge worker for the 21st century.

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Case Study of an Advanced Technology Business Incubator as a Learning Environment

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Successful technological innovation requires collaboration between entrepreneurs and business investors, often inhibited by socialization into diverse professional cultures. This case study investigated incidental learning that bridges the gap when individuals are linked through economic development centers to create innovative new businesses. The theoretical framework included professional culture, informal and incidental learning, boundary-spanning, and resource linkage. Analysis of 82 critical learning incidents yielded findings in both functional and bridging learning, highlighting the role of context design.

Keywords: Informal Learning, Professional Culture, Resource Linkage

The diffusion of technological innovation can deliver great benefits to individuals and to society in the form of wealth, employment, infrastructure, and products and services of all kinds, as well as at least partial solutions to problems of disease, pollution, isolation, hunger, illiteracy, and natural disasters. The complete cycle of technological innovation is complex and requires an array of talents, including the entrepreneurial development of the idea as well as the financial investment acumen to understand and effect marketplace success. Thus, the speed and success of the innovation depend on collaboration between entrepreneurs and investors, which can be inhibited by their prior socialization into different, even adverse, professional cultures. Culture itself is largely a product of incidental learning, that is, a schema of attitudes, habits, and heuristics formed primarily as the result of association with cultural "veterans," not through deliberate study or instruction. Learning that can bridge professional cultures is equally a product of incidental learning, which can occur as entrepreneurs and investors interact and consider mutual interests in the context of advanced technology economic development centers, often called small business incubators. The central concern of this study was the function of these economic development centers -- specifically publicly-funded organizations that work in the common interest -- in creating and maintaining environments for the incidental learning that bridges professional cultures, thereby facilitating innovation and its societal benefits.

Theoretical Framework and Literature Base

A theoretical framework was fashioned for this exploratory study combining elements of its "parent" disciplines, professional culture and informal and incidental learning, as shown in the clear circles in Figure 1. Within the area of professional culture, the focus of the study was entrepreneurs (specifically technology entrepreneurs) and investors (primarily venture capitalists). As shown , there was already an overlap, demonstrating a recognition of their interdependence in building new, successful firms based on technological innovation. To grasp the essence of a profession, both the attribute approach (Van Maanen & Barley, 1984; Trice, 1993; Dean, 1995; Raelin, 1997; Brien, 1998) and the power approach (Bloor, 1994; Rusaw, 1995; Boje, Fedor, & Rowland, 1992) to definition were studied, leading to conclusions that entrepreneurs and venture capitalists:

- Display some of the characteristics of a profession, but are more accurately considered *professional groups*, not professions, for purposes of this study.
- Are alike in some ways (for example, in being expert decision makers and relationship builders) but unlike in the critical area of *agency*, in that entrepreneurs risk all to be owners of their piece of the world, whereas venture capitalists are typically the well-rewarded agents of others.

Significantly, as the study proceeded, the accumulation of findings around a third professional group, the senior staff of the economic development center, made it desirable to add them as an additional focus. To better understand the challenges and activities of this group, additional reading and analysis was done in the areas of boundary spanning (Aldrich & Herkner, 1977; Callahan & Saliponte, 1979; Friedman & Podolny, 1992; Keller & Holland,

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1975; Lawrence & Lorsch, 1986; Powell, Koput, & Smith-Doerr, 1996; Tushman, 1977) and resource linkage (primarily Havelock, 1976; Havelock & Zlotolow, 1995).

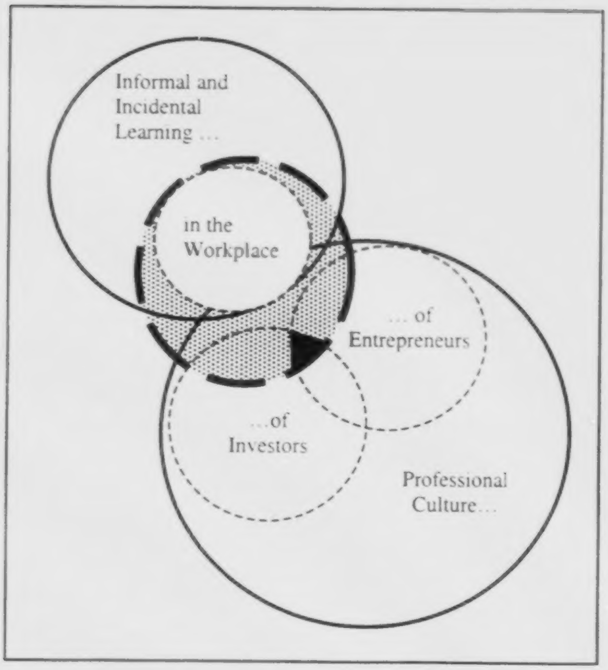

Figure 1: Overlapping and Extending Theoretical Frameworks

Informal and incidental learning apply to all of life's aspects, but this study focused on workplace experiences. Among the most prominent writers in this area are Watkins and Marsick (1990, 1992, 1997), who defined informal learning (with incidental learning as a sub-category) as location-neutral, based on the learner's experiences, non-routine, often tacit, and highly contextual. Others (Bruce, Aring, & Brand; 1998; Rossing, 1991; Zemke & Tough in Howe, 1991) reported that the great majority of workplace learning is informal. For purposes of this study, incidental learning was differentiated from informal learning, with the distinction hinging on learner intent (see Ellinger, 1997). Marsick and Watkins again established the definition -- "[incidental learning is] a byproduct of some other activity, such as task accomplishment, interpersonal interaction, sensing organizational culture, trial-and-error experimentation, and even formal learning (1990, p. 12) -- drawing support from Dewey's interpretation of the problem-solving method, an iterative interplay of conscious and unconscious learning routines, checked by reflection. Additional segments of this literature examine networking, workplace socialization, and communities of practice.

The gray area in Figure 1 refers to the expansion and integration of the applicable segments of the two major streams of literature. One intent of this research was to extend the existing theory base of informal and incidental learning further into the domain of scholarship about professional culture. The black wedge portrays the specific starting place -- where the context of activities at economic development centers facilitates learning by entrepreneurs and investors to communicate and work effectively together. This area was sparsely populated, but included researchers of the intra-corporate interface between marketing and R&D (Gupta & Rogers; 1991; Moenaert, Meyer, Souder, & Deschoolmeester, 1995; Moenaert & Souder, 1996; Song, Neeley, & Zhao, 1996; Souder & Chakrabarti, 1978), by Starr's work on organization formation (Larson & Starr, 1993; Starr & Fondas, 1992), and by Cable and Shane's 1997 characterization of the entrepreneur-investor relationship as a "Prisoner's Dilemma."

Finally, two key components of the context that permits, requires, enhances, and validates bridging situations completed the theoretical framework of the study: the venture capital decision-making process, underlying the early stages of the life cycle of the association between venture capitalists and entrepreneurs (see, for example, Fried & Hisrich, 1994; Hall, 1989; Tyebjee & Bruno, 1984); and business incubators, characterized as "innovation brokers." Such incubators are not directly involved in technology or product development, but provide low-cost work space, shared administrative and advisory services, and, increasingly over the last decade, educational and developmental programs for the resident start-up companies. According to the National Business Incubator Association Internet site (www.nbia.org), the U.S. has over 600 business incubators, housing over 19,000 companies, over half being urban or suburban public or private not-for profit entities, and one quarter specializing in technology clients.

Purpose of the Study and Research Questions

The purpose of this study was to describe incidental learning among members of divergent professional cultures linked through advanced technology economic development centers to collaborate in creating innovative new business organizations. The inquiry was driven by two central questions:

1. What is learned in critical incidental learning episodes by key participants of advanced technology economic development centers?
2. What environmental factors, such as interactions, design features, and contextual factors facilitate the learning?

Methodology

A qualitative case study was conducted at a state-funded advanced technology business incubator in the southeast. Sixteen semi-structured interviews of the senior staff of the incubator and of entrepreneurs and investors identified by them as highly involved learners elicited 82 critical learning episodes. The Critical Incident Technique (CIT) was selected to help participants quickly and vividly recollect past experiences and to focus on describable specifics, such as their own behavior and thoughts before, during, and after an incidental learning experience. In addition, the CIT is widely valued for its ability to enhance data credibility (see Cseh, 1998; Ellinger, 1997; Stano, 1983). Content analysis, the constant comparative method, and narrative analysis were used in combination for data analysis and reduction. Specifically, content analysis was a non-intrusive and powerful aid in identifying and characterizing emergent themes; the constant comparative method served to repeatedly test the influence of new data on provisional categories and themes; narrative analysis preserved the social nature of the learning experiences and the interviews and balanced the fragmentation introduced by the content analysis.

Three questions tested the significance of the findings: How directly connected is a finding with the research questions? Did most members of all three groups addresses the theme? Was the learning self-described? To maximize the credibility and trustworthiness of both the research process and its outcomes, several measures were used, especially triangulation (of data collection, data analysis, and theoretical frameworks) and consultation (member checks, peer reviews, an intercoder reliability process, and reviews by Dissertation Committee members and other faculty). Also, a robust audit trail was maintained, including a record of procedures and logistics, tracking of the entire analysis and interpretation effort, and a personal journal of expectations and reflections.

Findings

Findings emerged in two broad clusters, mirroring the research questions.

"What Was Learned" Findings

Six categories of learning were described, including the functional and bridging learning reported by the three professional groups who collaborate within the incubator environment. Functional learning was defined as *the acquisition of knowledge instrumental in achieving mastery in one's work performance*, with the proviso that different kinds of mastery would be sought by each professional group. For entrepreneurs, functional learning focused on the essentials of business viability, and incidents recounted by this group dealt with enhanced self-knowledge, appreciating the need for the talents and energies of others, and understanding and meeting the requirements of organizational leadership. Investors' functional reflected on what makes an investor most effective, and their incidents dealt with constant attention to time and efficiency, efforts to achieve good fit among team members, and clarifying the positive difference they made to new companies. For staff members, functional learning meant operationalizing the mission of the economic development center. In their accounts, critical incidents dealt with continually updating the admissions criteria, keeping an eye on the Big Picture, and learning to be investor surrogates to promote critical learning among their clients, the member companies.

Less common but more central to the purpose of this study was evidence of bridging learning, described in this study as *the acquisition of knowledge, skills, and attitudes during and as the result of bridging situations. Bridging situations are the bounded phenomena, comprising both the exertion and the result of conscious and unconscious efforts, that enhance empathetic understanding of another's meaning.* Members of all three groups reported incidents of bridging learning. Some entrepreneurs gained deeper understanding of how investors assess them and the opportunities they represent and how to approach investors as potential collaborators. Many entrepreneurs revealed some level of the acceptance of the relative power positions between them and investors. On their part, several investors related problematic incidents containing unspoken -- and often faulty -- assumptions about entrepreneurs, which had led them to take responsibility for acknowledging and checking out assumptions. Investors also recounted incidents wherein they experienced the risk of over-attachment to entrepreneurs and to the intriguing business ideas developed by them. Bridging learning among the staff members related to their interactions with entrepreneurs, specifically, the occasions where the need to be simultaneously encouraging and tough proved difficult. In addition, they dealt with the counter-intuitive choice to render more assistance to those who were already on the fastest track.

Environmental Circumstances Findings

The original categories implied by the second research question -- Interactions, Design Features, and Contextual Factors -- were modified during data analysis. The final set included Formal Design Features, Informal Design Features, and Contextual Factors.

The first category, Formal Design Features, encompassed the activities that occur at or are the responsibility of the incubator according to its charter and mission. One key theme examined how the staff goes about its work at the center -- by doing a great deal of preparation in the background and being continually ready to deliver "just-in-time" service with a light touch to their clients. Within a theme labeled Missed Opportunities, evidence was presented primarily from entrepreneurs' and investors' viewpoints highlighting areas that require more concerted effort by the incubator's management and staff or even changes in direction.

Informal Design Features are experience-based attributes of the economic development center. The first of two themes in this category described the Culture of Dialogue as experienced by the participants. Although data analysis connected with the second research questions was performed with no intent to differentiate among the professional groups, certain distinctions emerged when this theme was probed. For example, whereas staff members and entrepreneurs tended to characterize the interactions as organic, safe, and reciprocal, the investors emphasized their need to establish boundaries and maintain the distance of objectivity. Furthermore, members of each group offered a view of their role in interactions that was common within but distinct across the groups. The staff suggested that their role was primarily as helper, sounding board, and encourager. Entrepreneurs almost universally remembered their role as learners and seekers. Finally, the investors in the study portrayed themselves as evaluators and sources of expertise and access to key resources.

The final environmental circumstances category was Contextual Factors, referring to elements beyond the boundaries of the economic development center that influence it and its inhabitants, such as individuals, institutions and political, economic, social, or demographic forces. The first theme alluded to the quickened pace and heightened expectations of the Internet Economy, a global phenomena that has particular and daily influence on incubator participants. Finally, a relative lack of sophistication and insufficient access to both capital and culture was seen to characterize the metropolitan area that surrounds the incubator. In this study, this theme was portrayed by several interviewees under the heading "This ain't the (i.e., Silicon) Valley!"

Conclusions, Implications, and Recommendations

Three broad conclusions were drawn from the study.

1. *Incidental learning outcomes were evident in new competencies as well as in new attitudes.* In this connection, a pre-existing but unarticulated assumption -- that bridging, i.e., paradigm alteration, was necessary to a favorable business relationship across different professional cultures -- was recognized and discarded for lack of evidence. Furthermore, the importance of interaction between intentional and unintentional learning (see Figure 2) was underscored as well as the critical role of reflection in enriching problem-solving capabilities and self-awareness.

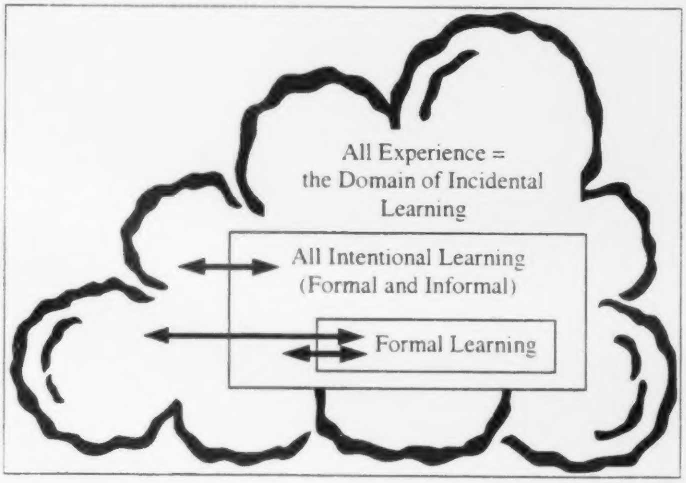

Figure 2 - Interactions of Formal/Informal and Intentional/ Incidental Learning

2. *Group identification persisted after bridging learning.* Evidence of bridging learning occurred in all groups, but no evidence indicated that the experience eradicated group identification. There was no hint of the emergence of a new, blended group, nor had this been expected. Importantly, the specifics in the bridging learning accounts by members of each group were discernibly different; furthermore, self-described role identification was cohesive within groups and dissimilar across groups. Viewed from a different angle, however, the very nature of bridging learning led to the conclusion that those who experience it became more alike in a way that transcends professional boundaries. Regardless of which group they are identified with, they develop their capacity to empathize with patterns of thought and response typical of another group. If this kind of learning is considered growth -- for example, that these individuals are likely to possess more self-awareness, empathy, flexibility, and maturity than those with less examined lives -- it is somewhat at odds with the concept of growth as discussed in the professional culture literature. For example, Trice (1993) and Van Maanan and Barley (1984) characterized professional career advancement as moving toward the center of the profession, becoming increasingly an insider as well as increasingly separate from other groups and the general public. Further study and reflection are needed to determine which capability -- to be able to bridge professional cultures or to become more archetypal of one's own profession -- is more likely to propel a practitioner toward greater professional effectiveness and success.

3. *"Bridge Building" itself is an emerging professional group.* The distinctiveness of the functional and bridging learning experiences of the incubator staff illustrated that their job might well be viewed as a professional endeavor in itself. Analysis of the "linker" group according to the same attribute model applied to the other professional groups revealed comparable -- and perhaps greater -- levels of autonomy, commitment, collegiality, education, service orientation, and expertise.

Implications for Theory and Practice

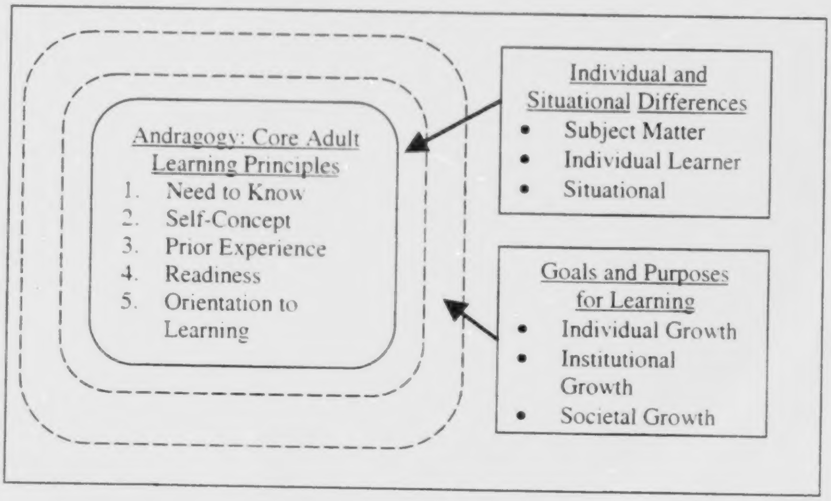

Figure 3 - Andragogy in Practice (from Knowles, Holton & Swanson, 1998)

Regarding incidental learning in the workplace, specific attention to the context of learning has been, until recently, lacking. Very recent work by Cseh, Watkins, and Marsick (1999) re-conceptualized Marsick and Watkins' model of informal and incidental workplace learning to include the learning context. "Based on [Cseh's study of Romanian managers], it is clear that the context permeates every phase of the learning process -- from how the learner will understand the situation, to what is learned, what solutions are available, and how the existing resources will be used in the learning process" (Kuchinke, 1996, p. 12-1). The focus on the environmental circumstances of participants' incidental learning in the current study increased the scope of the research in this direction. In addition, the findings of this study potentially add a new dimension to the model recently produced by Holton and Swanson (1999), portraying two layers of contextual factors (Individual/Situational Differences and Goals/Purposes for Learning) surrounding adult learning efforts (Figure 3). Holton and Swanson's outer layer differentiates between the learning intentions of the individual, the institution, and society. The separability of learning intent -- at least between the individual and the institution, with the possibility that the institution is executing a societal mission -- from learning enacted is central concept of this study. Particularly during data analysis, it was productive to probe the learning dynamics in the environment within and surrounding the economic development center with questions such as

- Who is intending to learn what?

- Who has the intention that someone else will learn, and what?
- What is learned because it was intended?
- What is learned besides what was intended?
- What supports learning that one party intends for another?

New insights might emerge from a review of existing research performed with questions such as these in mind.

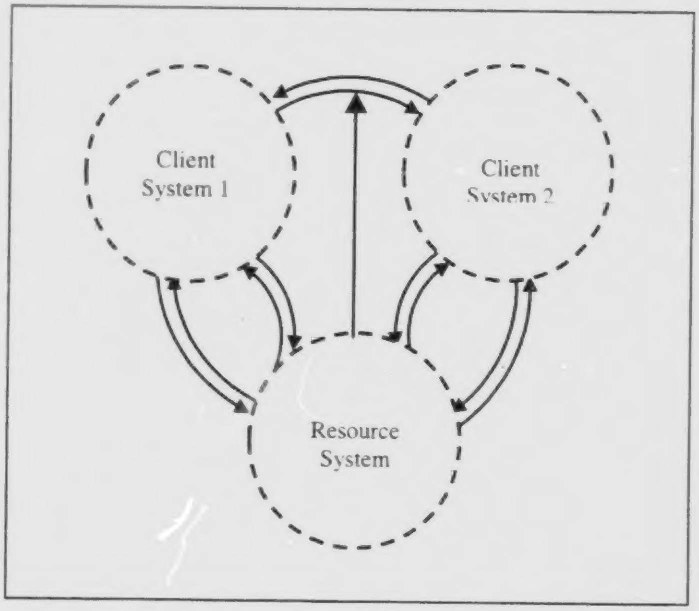

Figure 15 - Extended Problem-Solver Resource Linkage Model (Based on Havelock *et al*, 1976)

Regarding the Resource Linkage Model, outcomes of this study suggests an extension of the problem-solving resource linkage model as put forth by Havelock *et al* (1976). The extended model (Figure 4) shows that a resource system can have relationships with more than one client system. The solid vertical arrow indicates the support that the resource system gives to the relationship between the several client systems. In the current study, of course, the resource system was the advanced technology economic development center, and the client systems were -- or could be -- individuals and organizations in the other two professional groups. There was ample evidence that the staff of the center viewed the entrepreneurial companies as their clients, but the relationship with the investment community was ambiguous. The new model suggests that the center not only can but should consider viewing investors as another client system set. In doing so, they would play a useful role in supporting the relationship between the two other professional groups that share the learning environment.

Implications for practice include new approaches to program development, staff development, and physical layout at economic development centers and other entities that constitute bridge-building learning environments. For example, efforts can be made both to broaden participation in programs, fostering greater contact among members of the diverse professional cultures, and to include more opportunities for reflection on experience in these contacts. Developmental programs for the incubator staff could sensitize them to their linkage role and establish both a vision and techniques to enhance their performance. Finally, a new awareness of the importance of the setting could prompt incubator management to increase opportunities to experience the "karma in the walls and halls," to congregate in impromptu meetings, and to share in the folklore and spirit of the extended organization.

Recommendations for Further Research

Broader and deeper findings would result from additional qualitative study (such as comparative case study, ethnography, and longitudinal study) of the same and similar populations; from quantitative surveys to be developed when categories and sub-categories have stabilized; and from action research projects involving one or more professional cultures in the same or similar settings. In addition, it would be worthwhile to consider how the ground covered in the current study could extend into cyberspace. The number of internet-based "virtual incubators" is proliferating steadily, sometimes augmenting the reach of a physical incubator and sometimes standing alone. Such a study would delve into critical questions of professional culture, incidental learning, and the role of interpersonal interactions when participants seldom or never meet face to face. Finally, the same research design could also be extended to different populations, as there are many situations that call for bridging learning, whether or not it is facilitated by third parties. This is increasingly the case as economic globalization and technological developments of all kinds continue in overlapping waves to reshape the workplace and interorganizational relationships.

Additional study in professional culture is also called for, because the findings of this study offer a portrayal of professional growth that differs from prevailing, inwardly-focusedconcepts. As discussed here, bridging learning helps individuals to transcend professional boundaries, be more self-aware, and behave more flexibly than those without it. As this notion appears to be new ground, an exploratory, qualitative study, involving in depth interviews with successful professionals, is needed to provide new insights about alternative pathways to professional achievement and begin a new research agenda.

Contributions to HRD

The principal contributions of this study to the HRD discipline are

1. *An emerging definition of a learning environment* that can be designed and managed as a context for incidental learning in the workplace, for which HRD professionals will have advisory and possibly primary responsibility.
2. *Modification of the Resource Linkage Model*, providing for multiple Client Systems served by a Resource System. Again, HRD professionals are positioned to adapt and expand this model to particular organizations.
3. *Empirical results available to faculty and researchers in human resource development* -- as well as in fields such as adult education, the sciences, engineering, business, and entrepreneurship -- particularly as they support cross-disciplinary educational offerings. For example, opportunities might be created that bring together students in technology fields, in business and management fields, and in human resource and organization development to begin the bridging of professional cultural gaps between them.

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Independent Workforce Theory: Implications for HRD

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An emerging theory of an independent workforce presents profound implications for human resource development (HRD). The theory contends that advancements of technology, coupled with the globalization of industrial and commercial activity, is empowering a highly educated, independent workforce, significantly altering the relationship between management and labor. An independent workforce will impact the practice of organization development as well as personnel training and development.

Keywords: Independent Labor, Global Labor, Self-Directed Learning

The US marketplace in the post World War II years easily accommodated domestic and international enterprises that had distinct and separate economic activities. From its ascendant perch atop the global economic structure, the US dominated development, determined the rules of international trade, garnered raw materials from third world countries, and converted them into consumer and military products. The economics of competition finally overwhelmed political systems, converting autocratic regimes into consumer-driven societies, and spreading a new technocratic philosophy from Europe to Asia. Fundamental changes are now redefining the nature of the management-labor relationship, creating a fertile arena for developing theory that can focus HRD contributions toward a new potentially egalitarian world economic order.

While some industrial and commercial sectors have been influenced throughout modern times by international economic forces, domestic enterprises formerly subject only to local and regional market considerations are now confronting the reality of a new human resource capital that is increasingly determined by global economic and political forces.

Technology as an Equalizing Agent

> *The new employment contract falsely promises that employees will be made employable over their lifetime in exchange for an elimination of the employer responsibility of providing lifetime employment. (Ettorre, 1996)*

Technology has emerged as an empowering force for labor, enabling the spread of information previously closely controlled by political forces–including professional organizations and educational institutions. Outsourcing has become an equalizing economic force, increasing the standard of living in many countries once considered third-world economic forces. Regardless of political system, both Asian and European entities have captured an entrepreneurial spirit, driving changes that empower workers. The equations that have empowered the American contingent force might one day have a similar global impact.

The Skill Set. US American workers have discovered for themselves that a down-sized corporate world requires self-training to ensure continued success. Workers are increasingly recognizing that their combination of marketable skills increases their ability to compete individually for jobs that change radically as corporations respond to national and international market pressures. At the same time, the use of technology internationally is also providing the same opportunities for workers in other countries, including the emerging third-world.

The Internet. The randomness and independence of the marketplace is best represented in the growth of the internet, providing a communicator not just of information, but eventual access to global labor markets for everyone with skills that can be matched to job requirements. The cross-cultural implications of technology transfer need to be researched as an emerging change mechanism.

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Emergence of Contract Labor

As Etorre (1996) noted, the employer-employee concept of commitment has evolved with the need for corporations to respond quickly to changes in the marketplace. Pfeffer (1995) maintains that companies can still cultivate a relationship with workers that will serve both corporate and individual needs, though he recognizes that independent contracting is changing the relationship between management and employee. That movement is represented in the widely-held US managerial philosophy that champions lean organizations. Contract labor is a reversion to pre and early-industrial revolution business relationships, where individuals were paid for individual craft work or contracted to work by industrialists.

Internationalization of the Work Force.

Troopers realized . . . the old trucks were occupied by young Mexican men, recently arrived in this country and working to repair storm-damaged roofs . . . officers turned over 13 illegal immigrants from Mexico . . . to the INS for deportation.(Minneapolis StarTribune, August 6, 1998)

Political forces and transnational business are also contributing to change in the character of the work force. Intermittently viewed as exploited labor, third world employees generating products for the international market are nonetheless increasing the standards of living in their own countries. Recent pressures on US textile industries and shoe manufacturers by political entities have driven recognition of worker conditions and grievances beyond US borders. More effective international unionizing may not be far behind, as pacts among hemispheric NAFTA countries honor provisions for workers established by treaty, and other applicants to that trade alliance will also be subject to such provisions. Similarly, the European Union is altering the management-employee equation as economic borders disintegrate. International labor accords that recognize standard conditions of labor accelerate the formation of an independent workforce.

The Virtual Company. Labor mobility is further achieved with the emerging virtual company, where employees can work on computer systems anywhere in the world. Invoices and payment for services will be electronically transferred for work that is electronically created and submitted. International protocols to supervise the traditional work experience now become irrelevant, insofar as the world wide web is uncontrollable in its present form. Global benefits administration, universal health insurance, and pension development are areas where economic, social science, and political research needs to be initiated. The emergence of an independent workforce drives the need for that research

The Independent Workforce Theory

The knowledge worker represents a class of laborers who will harness technology to create self-directed work channels that will cross national frontiers independent of transnational companies and regional political alignments. The emergent independent workforce will redefine the relation between employers and workers.

Corollary 1. Economic and political mechanisms will emerge that support portability of worker benefits across national frontiers. Such benefit vehicles will be regional and may function through trade organizations, intergovernmental bodies, industrial or commercial alliances, transnational labor unions, or labor broker cooperatives.

Corollary 2. The evolving labor-employee relation based upon knowledge work will generate self-directed employment opportunities for other classes of labor; the emergence of independent labor among broader classes will further dissolve national boundaries.

Corollary 3. Regional political alliances will recognize independent workforce relationships within their boundaries and will seek competitive advantage over other regional alliances. Regional economies will function according to the availability of human capital to freely respond to changing competitive forces and needs among regional elements.

Definitions. Independent workforce labor is defined as self-employed contract-for-services work through different agencies, including the worker directly or brokered relationships as further described, below. The knowledge worker is defined as an individual who owns and controls the intellectual tools to perform the service or create the products.

Foundation of The Independent Workforce Theory

The US model of capitalism has finally, and successfully, revolutionized global economics. Instead of political forces leading an economic competition for regional and global power, the relentless forces of capitalism are reducing political competition to an economic equation. The US domestic marketplace has taken a half century to define how work will be conducted, and those economic structures developed by US business now compel adoption of similar mechanisms throughout the international marketplace. Foremost among US business practices is the emergence of a self-directed, self-educated, highly mobile, independent workforce. Driven by the realities of technology that both equalize and empower individuals, US workers are learning how to survive and even flourish in a business world that has traded security and loyalty for portable skills. The lean US corporation of today has placed a premium on worker education, ability, and flexibility. Just as corporations now respond to quickly changing markets, individuals are arming themselves with the tools to compete in that same marketplace, creating a highly-trained and mobile employee pool.

The current contract laborer is generally a knowledge worker whose skills command a premium price both in the US and abroad. The tremendous growth of broker organizations in the service industry is a testimonial to the changing management-employee relation. A premise of this theory is the upgrading of the notion of supply and demand, where independent labor both represents and uses technology to identify opportunities globally, then contracts its services directly to transnational employers or through broker organizations. A corresponding market mechanism will emerge that develops and regulates labor benefits that are globally portable, helping to define a new economic role for regional or international political entities.

Is The Independent Workforce a Viable Theory?

This section critiques the emerging theory of an independent workforce against the seven requirements that Patterson established for a theory (1986, xxi-xxiii):

Importance. The phenomenon of a developing cadre of knowledge workers who negotiate their own cross-frontier working arrangements has profound implications for the future hemispheric trade. Portability of benefits, pension plans, training, and credentialling are developing as significant issues among trading partnerships and alliances. The need for a theory to adequately explain this phenomenon easily meets Patterson's test.

Preciseness and Clarity. The notion of an independent workforce suggests commonly recognized conditions: contracting for services is a straight-forward process, subject to host country laws and regulations, and treaty agreements. Data can be collected from contracting companies or from broker organizations; hypotheses about transportability of benefits or worker mobility can also be tested empirically by tracking visas, and so on.

Comprehensive. An independent workforce concept recognizes the essential differences between management and worker as the major defining variable; the self-directedness of the contractor and related working conditions, benefits, and applicable laws should be accessible to rigorous research.

Operationality. Labor statistics available domestically and increasingly so in treaty or alliance countries may confirm how the theory applies in real life to the developing independent workforce. Transnational corporation records also can help test the propositions of the theory.

Empirical Validity or Verifiability. The changing relationship between management and employees begs for redefinition to illuminate the dynamics of international trade and commerce. Outsourcing labor is now commonplace, where companies engage labor for specialized projects, create limited-duration teams, or rely on temporary associations to offset cyclical business. The advent of knowledge work as a broad labor category begs for new theories to explain altered dynamics and to project future efforts.

Fruitfulness. The independent workforce revisits the social theories of the Marxists or 20th century German philosophers who envisioned a self-directed workforce that celebrated the ascendancy of the worker. The theory proposed here suggests a new balance among political and economic systems, where worker expertise equalizes opposing forces, helping to bring about the economic and political equality of the idealist.

Practicality. The ultimate test of the theory's practicality will be the development of the economic and political mechanisms that support a self-directed workforce. Issues of transnational credentialling, portability of benefits, and access to project-based assignments wherever treaties or alliances permit need to be resolved to effectively operationalize the theory.

Introducing Dubin's (1983) notion of boundaries helps to answer Patterson's concern for the practical application, where an independent workforce might encounter geopolitical limitations. Hence, in the European

Union, in the Mercosur member nations of South America (Ostroff, 1997), and in NAFTA, member countries have erected portals as well as barriers to free movement of labor, according to regional or hemispheric political considerations.

One such political boundary is demonstrated by NAFTA members Mexico and the US, whose labor laws often conflict with each other, and where national labor laws remain subject to internal modifications that might impact agreements with other alliance members.

Patterson's criteria to measure the utility of a theory provides a sounding board for the emerging theory of an independent workforce, exposing it to initial tests of comprehensiveness and consistency. The theory proposed here is by necessity an emerging one, inasmuch as the phenomenon itself is under development and subject to dynamic political and commercial constraints. The ability of independent knowledge workers to harness changing domestic and international laws to penetrate global labor markets, matched with the increasing labor needs of domestic, national, international, and transnational corporations, presents a set of problems that in their solution will define how work is undertaken in the coming decades.

Toward an Evolving Labor Management

Labor management nees to evolve along with an increasingly independent workforce. This section examines challenges to HRD development of management systems to meet the needs of an emerging independent workforce.

Roots of the New Challenge. Ryan (1998) claims that extensive reorganization and cost-cutting has forced business to look for alternatives to the "traditional dedicated staff model" (p. A10). Similarly, public managers suggest that a "decade of downsizing, reengineering, and doing 'better government with less' has led many government organizations to contract out, franchise, and privatize agency work" (Sumser, 1998, p. 37). These trends are redefining the workforce and how it is used, reflecting the new emerging employer-labor relation. The reengineering of corporate America that Ryan and Sumser cite does more than create a class of labor characterized by contracted work, the outsourcing of service *as well as* manufacturing work, and the emergence of a mobile, often self-employed technical knowledge force; it is also redefining the educational needs of vast populations for the coming decades.

HRD practitioners and educators will be challenged to meet the needs of a redesigned labor force that embraces new criteria for knowledge work beyond the employment standards of recent generations, and where an emerging independent labor force needs skills based on principles of entrepreneurship rather than on the subject-matter expertise foundational to the basic education theory of the past.

International Contracted Labor. Vosko (1998) describes an international struggle over the regulation of private employment agencies whose formal recognition came in the original International Labor Organization charter of 1919 that declared that labor was not a commodity. The Convention Concerning Fee-Charging Employment Agencies (No. 34), adopted by eleven member countries in the early 1930s, became the first international labor standard and served as a framework for countries to develop their own national legislation.

The definition for fee-charging agencies came to include "any person, company, institution, agency or other organization which acts as an intermediary for the purpose of procuring employment . . . [who derives]. . . any pecuniary or other material advantage from either employer or worker" (Vosko, 1998).

Convention No. 96 modified the standard in 1949 to include either *abolition* or *regulation* of temporary help firms. Countries that sanctioned both private employment as well as public employment agencies were to regulate with *mandated* yearly licensing, supervision, fixed-fee scales, and special rules for recruitment and placement.

By the 1950s, temporary help firms evolved generally from market intermediaries who recruited and placed workers in jobs in their own right. By the 1960s, ILO member countries were challenging businesses that "only employed temporary help workers so long as they were engaged by an outside party" (Vosko, 1998).

For the next two decades, ILO members argued about regulating the temporary help firms they viewed as clerical support systems. Conventions 34 and 96 were finally revised into three dominant regulatory models: prohibition, regulation, and non-regulation (Vosko, 1998).

Contemporary Context. Sumser (1998) defines contingent work in four employer categories (38-39):

- Temporary help company: company employees are contracted to clients who supplement their own workforce. The temporary firm recruits, hires, pays, and trains its employees.
- Consulting firm: company specialized services require high independence; may provide advice, services, or studies. Workers may be direct employees or hired through subcontracting firms.

- Independent contractor: self-employed individual performs services similar to those of consulting firms; independent contractors may be seen as "one person consulting firms."
- Professional employer organization: company with formal legal and administrative duties for setting salaries, benefits, and other management functions on behalf of all or most of a client workforce; sometimes defined as "co-employment."

Sumser notes that work has changed from the experience-based jobs dominated by factories to knowledge-based work dominated by the service industry. Vosko (1998) looked at employment forms in European Community and NAFTA countries, suggesting that "few scholars would deny that . . . part-time work, self-employment, contract work and temporary work are on the rise in both Europe and North America."

The industrial revolution concentrated labor in cities where manufacturing jobs eventually transformed an agricultural workforce into one producing and distributing goods. The economy now has professional and service classifications with occupations as diverse as aroma-therapist and personal coach. The evolution continues as independent craftsmen and professionals, for example, are replaced by disposable diapers and discount pharmacies that make diaper services obsolete, on the one hand, and corner drugstores disappear, on the other.

Those same chain discount stores in high-traffic malls and assembly-line producers of disposable diapers are subject, in turn, to advances in technology, management, and distribution that further reduce the labor force. Hence, the employer-labor relation has now come full cycle: the technology and management systems that freed agricultural workers from a reliance on the vagaries of nature and which led to a better standard of living, is now returning workers to the same entrepreneurial labor that characterized their forebears.

Employee Involvement Versus Outsourcing

Ettorre (1996) described "empty promises" associated with the new employment contract paradigm. The promise of internal retraining for employees associated with contemporary downsizing has been generally discarded in practice, according to her analysis, confirming a diminishing employer commitment to workers. Juravich (1996) examines employee involvement in his review of empirical research on labor-management cooperative programs over a 20-year period. His meta-analysis concludes that employee involvement programs are likely to change attitudes, job satisfaction, and improve communications skills that over the long run can contribute to corporate economic performance, provided that management also commits to a jointly-directed effort. Juravich notes that effective employee involvement programs often result in "greater identification of workers with the employer," moving unions to consider such programs a hindrance to new organizing (p. 62).

Weiss (1997) takes a more pragmatic view of contemporary labor-management relations, where job retention in tight labor markets has put a premium on corporate ability to generate attractive salary, benefit, flexible working conditions, and employee opportunities for training and advancement that recognize the importance of a company culture that supports and empowers workers. Foegen (1998) takes the concept of employee self-sufficiency one step further, asking whether "managers are losing control" as he examines a decentralization trend that instead reestablishes managerial control through technology and labor empowerment.

Global enterprise does not equally translate certain labor concepts across national borders. Barth, Karch, and McLaughlin (1997) examined the international retail equation, finding that "differences in consumer preferences, labor shortages, unfavorable tariff structures, and limits on foreign ownership" hinder corporate success overseas. Retail practices and business culture that were successful in one setting did not necessary translate equally abroad, forcing retailers to reorganize operations, alter supplier relationships, "*outsource certain activities*," and develop international management teams. Other industries have experienced similar barriers, as reported by Learmount (1997), who relates flight industry anxieties regarding labor outsourcing for what he terms "non-core services" such as maintenance and repair operations.

Barton and Bishko (1998) examine global mobility from an HR perspective, focusing on different types of expatriates and assignments. They contrast home country-based compensation packages with the host country-based packages and examine how outsourcing of project management helps solve discrepancies between available resources and project requirements. Their central concern is the relocation of expatriates and how management can learn to more effectively use expatriates while maximizing their international career opportunities.

Finally, Cordon, Vollmann, and Heikkila (1998) examine outsourcing in terms of core activities versus non-core activities. They evaluate outsourcing through two theoretical frameworks, one based upon a competency model, the other upon a risk / effectiveness model. Some business units may regard certain tasks as core activities, but other units may not, tending to "oversimplify" outsourcing decisions that may greatly impact a company's productivity.

Implications for HRD

HRD theory must expand or adapt if it is to incorporate the evolutionary independent workforce theory in the primary HRD areas of organization development and personnel training and development. The re-emergence of contracted labor, now defined in technological and global terms, will force HRD to respond to employment modalities better suited to the 21st century than to the 20th. The following lines of inquiry might be fruitful for researchers.

The Independent Workforce and Organization Development. Organization structures must address the needs of an international contracted labor force. Contemporary organization models (Bartlett & Goshal, 1990; Cherns, 1987; Cummings & Worley, 1993; Luthan, Marsnick, & Luthans, 1997; Rothwell, et al., 1995) include the matrix organization, the socio-technical organization, the conventional functional (hierarchical) model, multinational cooperatives, the broker organization, and the hetarchy (Solvell & Zander, 1995). Independent labor mechanisms might need different organization processes or functional links, some better suited to regional or hemispheric political economies than to a universal application.

The hetarchy is conceived as a structure ideal for incorporating cross-cultural differences into organization processes (Wolf, 1997). Cross-cultural determinants may be overlooked in the rush by companies to expand internationally, and ill-prepared employees increase the cost of doing business abroad. Notwithstanding the effectiveness of employee training, a dilemma for Human Resources remains where organizations do not recognize the need for an independent workforce to access health care, pension plans, and so on. European political entities have acknowledged such a need, and use a common market concept to bring economic change about. HRD can spearhead such change by creating a model that surpasses the European vision, combining the performance needs of transnational corporations with the emerging requirements of an independent workforce.

The Independent Workforce and Personnel Training and Development. The preceding sections have outlined a developing theory of an independent workforce based on emerging technology and knowledge transfer across national frontiers that empower individuals through education, economics, and political change. As individuals assume greater responsibility for their own education needs–some borne of necessity because of transnational corporate project-orientation, others because of the equalizing influences of technology–the need for continued training likewise becomes a greater issue for corporations.

Companies who react to marketplace change through abrupt changes in the workforce are continuing to alter the management-employee equation that was once celebrated for its personal commitment. The contingent work force that meets domestic US labor needs now evens out the business cycle for many US companies. As that model extends internationally, global firms will increasingly rely on contingent or contracted labor for short and long-term projects. Whether building a nuclear power plant in Saudi Arabia or developing a disaster plan for a Peruvian bank, contracted labor supplies the knowledge and skills for both projects. HRD must now help companies provide training to meet short-term corporate needs wherever they may be, at the same time generating education theory that empowers students at all levels.

The Independent Workforce as a Critical Outcome

Employee benefits that evolved over decades of organized worker effort are being erased by the new worker-employer relation that uses contingent labor concepts to reduce company-sponsored benefits. As business and industry redefine human resource systems to accommodate a fluid and flexible workforce, the streamlining of their work processes has created a burgeoning class of low-benefit workers. What will the new workforce look like?

Defining the New Contingent Workforce. Vosko (1998) categorizes how some companies incorporate emerging human resources practices that are defining the new "labor flexibility":

- Numerical flexibility: use of part-time, contracted, temporary, and casual workers.
- Functional flexibility: cross-training "core" employees to cover varied tasks.
- Distancing: shrinking core group size, meeting work needs with subcontractors.
- Pay flexibility: adjusting rewards to polarize numerically / functionally flexible workers.

Labor flexibility practices are meant to enhance corporate efficiency and increase competitiveness by lessening numbers of workers in core positions where pension, medical, and other benefits were typically accrued over years of employment with the same firm.

While companies are adopting flexibility practices that remove worker protections, the US is decreasing its governmental regulation in many sectors. Major industries are now deregulated, a movement originally conceived to heighten competition and lower prices. Competition has increased, with lower prices one result, and reduced benefits for laborers, another. A continuing decline in customer satisfaction speaks to a population less able to meet essential and basic standards of service (Pedersen, 1997, p. 56). The competition that has driven US American business to tighten investment in human resources has had the effect of slowly transforming the nation's employees into a self-directed workforce. Workers who used to rely on company training throughout their work life-cycle must now learn to capture their own training to assure survival.

Further Investigation. Further research is needed to explore how transnational corporations use outsourced labor. Some organization models recognize cultural determinants in filling temporary positions, such as those cited by Stauffer (1998) about understanding Latin values, while others examine unionization across frontiers (Rose, 1997). Other analyses must determine how empowerment of individual workers will change the employment equation in transnational corporations, including the impact of independent contracting beyond the knowledge worker. Can barriers among trade alliances and regional commercial *ententes* be removed so workers can join an independent workforce where both organization and individual flourish?

Conclusion

This paper has proposed a theory of an emerging, independent workforce that represents a new tension in domestic and international employment. US American-style business has come to dominate global commerce, transforming the economics of employment and redefining financial practices world-wide. The outsourcing revolution in business and the re-emergence of entrepreneurial labor are creating new challenges for HRD in both organization development and personnel training. In response, practitioners must decide whether they will support the new human resources models of business and industry or instead help to create a self-directed, independent labor force that has the tools to equalize the employer-labor equation.

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Factors Influencing Ethical Resolution Efficacy: A Model for HRD Practitioners

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A model of ethical resolution efficacy for HRD practitioners is proposed. The model suggests that factors related to the individual, internal environment, and the HRD profession will influence ethical resolution efficacy. Recommendations for future research are discussed.

Keywords: Ethics, Decision Making, Model

In recent years the HRD community has increased the dialogue regarding ethics in the field. Last year the Academy presented the first edition of its Standards on Ethics and Integrity (Burns, Dean, Hatcher, Otte, Preskill, & Russ-Eft, 1999). Hatcher (1999) has suggested that the "newest addition to the theoretical foundations of HRD" is ethics (p. 206). For several years, writers have proposed that HRD practitioners play a critical role in shaping the ethical climate of the organization and therefore, they must be cognizant of their own ethical behavior (Lowman, 1991; Rothwell & Sredl, 1992). While the dialogue has increased, a systematic investigation of ethics in human resource development has not yet occurred. The field needs to conceptualize how this investigation should proceed. This paper presents an initial step in developing this conceptual framework by presenting a model for examining those factors influencing HRD practitioners' ethical resolution efficacy.

Problem Statement and Theoretical Background

The majority of the research that has been conducted examining ethics in HRD has focused on identifying potential ethical dilemmas. For example, Clement, Pinto, & Walker (1978) identified seven major categories of unethical behaviors observed by training and development practitioners. A list of thirteen ethical issues were generated by select members of ASTD for the ASTD Models for HRD Practice (McLagan, 1989). Others have identified ethical dilemmas facing organizational development consultants (DeVogel, 1992), adult educators (McDonald & Wood, 1993), and continuing higher education practitioners (Lawler & Fielder, 1993).

Beyond identifying dilemmas, the research has yielded little insight regarding how HRD practitioners resolve dilemmas and what influences their ability to resolve dilemmas. There are a few models available for practitioners to use as a tool when faced with a dilemma. The business literature provides many models to explain ethical and unethical behavior. For example, Brass, Butterfield, and Skaggs (1998) offered a fairly comprehensive model which emphasizes the importance of relationships in determining unethical behavior. Trevino (1986) suggested a model that combines both individual and situational variables that interact to explain and predict ethical decision making behavior. A few models have been developed specifically for practitioners in OD and adult education. For example, Gellermann, Frankel, & Ladenson (1990) developed a five-step model for ethical thought and action and Wooten & White (1983) proposed a model that examines how ethical dilemmas may occur in OD when the role of the change agent and the client system are in conflict. Brockett (1988), focused on three dimensions of ethical practice in adult education in his model: one's personal value system, consideration of multiple responsibilities, and operationalization of values. All of these models are limited in that they do not address issues most germane to HRD or they are limited in scope and do not include the myriad of factors that may potentially influence the ethical decision making process. In an article written specifically about ethics in organization development, DeVogel, Sullivan, McLean, & Rothwell (1994) wrote that "the OD literature yields little practical advice – or philosophical help - on resolving ethical dilemmas that OD consultants face" (p. 456). This remark also applies to the broader field of HRD.

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Significance of the Problem

As a young, merging discipline, still attempting to "define itself" (Shindell, 1999), HRD faces many challenges regarding ethics. Several leaders of the Academy have discussed these challenges. Marsick, for example, described how HRD professionals often are torn between helping employees and serving the organization in which they work. These "competing concerns" pose challenges to these practitioners.

Holton (1998) lamented the customer service orientation that frequently guides HRD practitioners. He wrote:

> . . .. many HRD organizations operate on the principle that customer service is top priority. When HRD operates from a paradigm of customer service, the tendency is to anchor practice in the core principle of customer service: ultimately the customer (the manager, trainee, and so on) is always "right" and gets what they want. The end result is that dumb, ineffective, and sometimes unethical practices are perpetuated and supported by HRD (p. 208).

He contends that often this customer service orientation becomes defined as "submitting to customer demands" which diminishes HRD's "power and influence" and does little to "guide practice" (p. 208).

Along with Holton, Swanson (1998) reinforced the need for HRD practitioners to make decisions based on sound theories. According to him, "It will take courage for HRD to stop being the *pharmacist* for the *management witch doctors* it is regularly asked to support. Instead of filling the prescriptions of *management witch doctors,* HRD professionals should advocate theoretically sound practices related to developing and/or unleashing human expertise in organizations for the purpose of improving performance" (p. 7).

Watkins (1994) described how issues of "professionalism" and "marginalization" represent major challenges to the field of HRD. While the field prides itself in being accessible to all, this openness can lead to unprofessional and/or unethical practices. Additionally, academics and practitioners in HRD often are marginalized, resulting in individuals feeling powerless, "separated," and "irrelevant" (pp. 298-299).

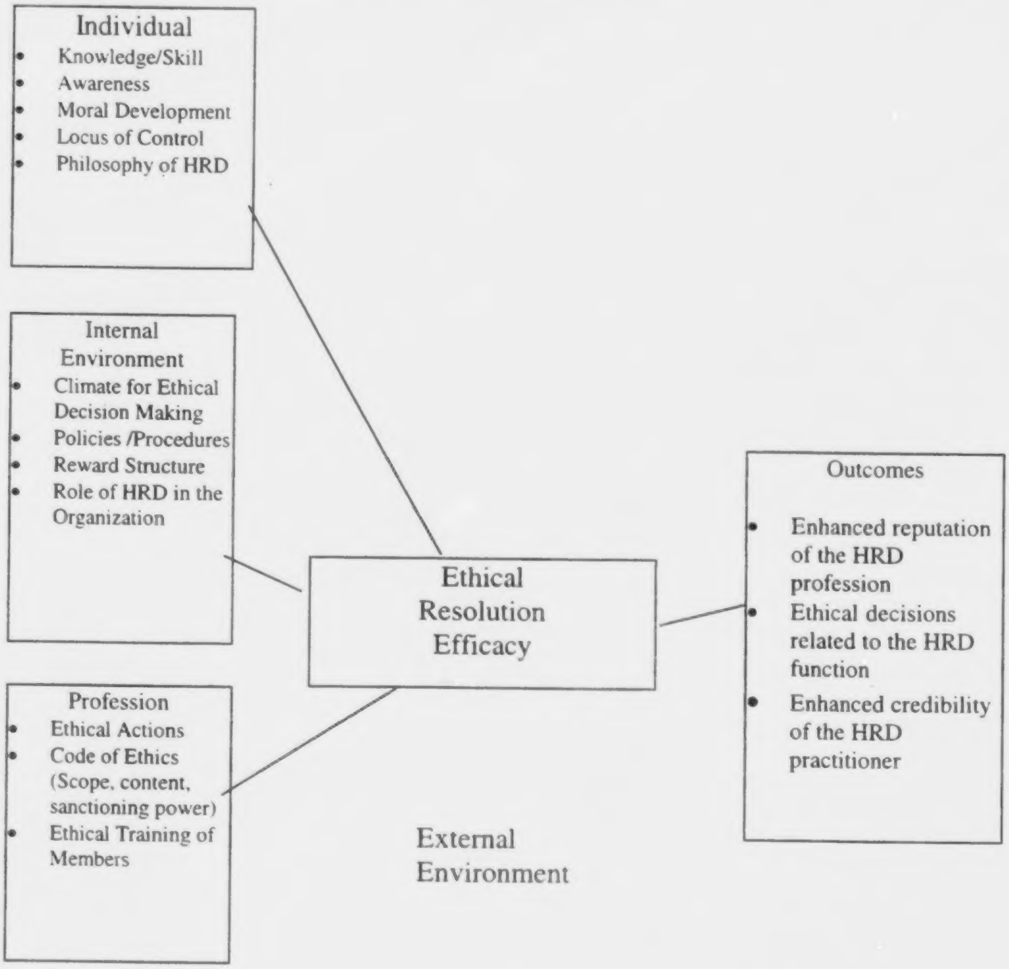
These concerns point to the need for a model of ethical decision making that takes into account the context in which HRD professionals practice and recognizes the specific issues that are salient due to the current state of the field as a profession. Therefore, the proposed model uses previous models and research that have addressed factors influencing the decision making process and proposes additional factors which may be important to HRD as it attempts to further define itself and facilitate ethical standards/conduct. Specifically this paper will investigate the following question: What factors influence ethical resolution efficacy for HRD practitioners? A review of the literature will be provided which will support the basic elements of the model. Also a brief discussion of recommendations for further research will be included.

Proposed Model

The preliminary model proposed in this paper focuses on ethical resolution efficacy, which is defined as a person's capability to resolve ethical dilemmas. Based on the concept of self-efficacy, a person's ethical resolution efficacy is likely to determine choice of activities, the effort one will expend in resolving a dilemma, and how long one will "sustain effort in dealing with stressful situations" (Bandura, 1977, p. 194). Individuals with high ethical resolution efficacy are likely to feel confident in choosing which activities to engage in or avoid and may feel more confident in their ability to handle activities that pose greater ethical risks. When faced with an ethical dilemma, these individuals are also likely to work harder and persist longer in resolving the issue.

Three antecedents will influence ethical resolution efficacy: characteristics of the individual, the organization's ethical environment, and the profession's views regarding ethics. These factors were developed based on a comprehensive review of the literature regarding ethical decision making behavior. An investigation of the business and HRD literature from the past 20 years was conducted. Two of the antecedents, characteristics of the individual and the organization's ethical environment, are well documented in the business literature as important factors to consider (e.g., Brass et al, 1998; Trevino, 1986). The third antecedent, the profession, and its influence on ethical decision making has not been investigated as thoroughly as the other antecedents. However, there is evidence that factors such as codes of ethics and peers will affect ethical decision making (see Figure 1).

Figure 1: A Model of Ethical Resolution Efficacy for the HRD Practitioner


Individual
Knowledge/Skill
Awareness
Moral Development
Locus of Control
Philosophy of HRD
Internal Environment
Climate for Ethical Decision Making
Policies /Procedures
Reward Structure
Role of HRD in the Organization
Profession
Ethical Actions
Code of Ethics (Scope, content, sanctioning power)
Ethical Training of Members
Ethical Resolution Efficacy
Outcomes
Enhanced reputation of the HRD profession
Ethical decisions related to the HRD function
Enhanced credibility of the HRD practitioner
External Environment

Characteristics of the Individual

Trevino & Youngblood (1990) found that individual differences affected ethical decision-making behavior. Specifically, they found that locus of control and cognitive moral development influenced ethical decision-making behavior. Individuals with internal locus of control and those at the principled stage of cognitive moral development (Kohlberg's stages 5 and 6) behaved more ethically (p. 384). Trevino (1992, 1986) argued that Kohlberg's model of cognitive moral development contributes significantly to our ". . . understanding how managers think about ethical dilemmas" (1986, p. 602). Hegarty & Sims (1978, 1979) found individual variables such as foreign nationality and Machiavellianism were positively related to unethical decision making behavior.

Additionally, an individual's knowledge and awareness of ethical issues should influence their capability to resolve ethical dilemmas. Most of the research has examined if years of education, type of education, employment background or years of employment influence ethical decision making. In a review of the literature regarding ethical decision making, Ford & Richardson (1994) concluded that the results are mixed as to the relationship between education, employment and ethical behavior and "the scarcity of empirical work makes it difficult to conclude anything other than further study is warranted . . ." (pp. 210-211). This model advocates that one's specific knowledge and awareness of ethical issues rather than education level, type of education, or employment experience will influence their ethical decision making efficacy. Both Lawler & Fielder (1993) and McDonald & Wood (1993) reported a large number of their respondents (adult educators, continuing educators, and HRD practitioners) could not or would not cite any ethical problems in their practice. Lawler & Fielder (1993) wrote: "Every job and every organization has ethical problems, although some more than others. The ability to recognize these ethical problems is dependent on the ethical sensitivity and knowledge of the observer" (p.31).

A well-defined philosophy of HRD will also influence a person's efficacy regarding ethical dilemma resolution. Very few research studies have examined this dimension to determine if it relates to ethical decision making. Hegarty & Sims (1978, 1979), using the Allport, Vernon, and Lindsey Study of Values found that individuals reporting an economic value orientation were less ethical. Hiemstra (1988) suggested that among other reasons, a personal philosophy helps the practitioner distinguish, separate, and understand personal values (p. 179). A philosophy that has been developed by reflecting on one's practice and applying one's knowledge of good HRD practices can assist the professional as he/she works through ethical dilemmas.

Internal environment

The ethical orientation of the organization in which the HRD practitioner works will also influence ethical resolution efficacy. In a qualitative study examining HRD professionals responses to specific ethical dilemmas, McDonald (1995) found that individuals employed in companies with strong corporate codes of ethics had little difficulty determining how they would handle the dilemma presented to them. Some researchers have found the presence of a code of conduct is positively related to ethical behavior (Hegarty & Sims, 1979; McCabe & Trevino, 1993) and McCabe, Trevino, & Butterfield (1996) found that the existence of a corporate code of ethics was negatively related to unethical behavior in the work environment.

Corporate policies regarding ethics, reward systems, as well as punishment of unethical behavior help to shape the climate for ethical decision making within an organization (Hegarty & Sims, 1978; Hegarty & Sims, 1979; Laczniak & Inderrieden, 1987; Trevino & Youngblood, 1990). For example, Hegarty & Sims (1978) found that when unethical decision making is rewarded, ethical decision behavior was lower. Laczniak & Inderrieden (1987) wrote of the need to make sanctions explicit:

> It seems increasingly clear that the proposed sanctions must be made evident and the particular behaviors which are prohibited must be clearly identified. This approach is appealing from an implementation standpoint because it focuses upon modifying the organizational environment to enhance ethical actions rather than in trying to monitor every possible situation where there might be a temptation to behave unethically (p. 304).

Additionally, Brass, Butterfield, and Skaggs (1998) have proposed a social network perspective to explain unethical behavior in organizations. This perspective may be applied to the HRD function in terms of its relationship with others in the organization. Examining factors such as status, reputation, surveillance, etc. may suggest a propensity to behave more or less ethical. If HRD practitioners are indeed "marginalized" and "isolated" within organizations, how might this influence their ethical decision making efficacy? While Brass et al. (1998) have proposed a model and list of propositions, empirical research needs to be conducted to determine how social networks may influence ethical conduct.

Profession

Finally, the prevailing attitudes and behaviors demonstrated by members of the HRD field will influence ethical resolution efficacy. Research indicates that peers, for example, influence ethical decision making. McCabe & Trevino (1993), in a study done with college students, found that peers' behavior had a stronger influence on academic dishonesty than the existence of an honor code, the understanding and acceptance of academic integrity policies, and the enforcement of ethical guidelines. In HRD determining who are influential peers becomes problematic. Does the practitioner perceive his/her peers as individuals within the organization in which s/he works? Or does the practitioner perceive his/her peers as other HRD professionals?

HRD practitioners employed within an organization may find that the organization's code of ethics assists them in resolving ethical dilemmas. However, many of these codes will not address issues specific to HRD. A code for HRD practitioners is likely to enhance ethical resolution efficacy. According to Frankel (1989), "a profession's code of ethics is perhaps its most visible and explicit enunciation of its professional norms" (p. 110). Professional codes serve a variety of functions. They assist in the socialization process of the professional, act as a deterrent to unethical behavior, and serve as an "enabling document" (Frankel, 1989, p. 111). However, the existence of a code will not ensure individuals will behave ethically. Laczniak & Inderrieden (1987) found that when clear sanctions were included with a code of ethics respondents demonstrated more ethical decision making behavior. McCabe et al. (1996) concluded that a code will influence employee behavior when it is "strongly implemented and embedded in the organizational culture" (p. 473).

The proposed model also suggests that educational programs that build awareness, knowledge, and skill in handling dilemmas will influence ethical resolution efficacy as well. Research examining the impact of ethics training on decision making has had mixed results. In a study of psychologists, Haas, Malouf, & Mayerson (1988) found that more formal ethics training did not affect ethical decision making. However, they were cautious in their reporting of this finding, suggesting further research should be done regarding this issue. Tannenbaum, Greene, & Glickman ((1989) reported that those psychologists in their study that were older and/or in faculty positions used more "complex ethical reasoning" than younger, student participants (p. 234). They concluded their discussion suggesting that "ethical reasoning processes" be included in ethics training.

External Environment

All of these factors will be influenced also by the external environment. For example, government regulations, market demand, and competition will influence the ethical climate of the organization and the individuals working within the organization. Hegarty & Sims (1978) found that increased competition correlated with increased unethical behavior. However, very few studies have examined how external factors such as competition influence ethical decision making (Ford & Richardson, 1994).

Finally, the model proposes that ethical resolution efficacy should result in three important outcomes: enhanced reputation of the HRD field, ethical decisions made related to the HRD function, and enhanced credibility of the HRD practitioner. Very few models focusing on ethical decision making /ethical behavior suggest outcomes beyond effective decision making or more ethical behavior. However, literature suggests that ethical behavior is a critical component of credibility (e.g. Kouzes & Posner, 1995). Therefore, it makes sense to include in our models what our ultimate goals are in investigating and promoting ethical behavior.

Recommendations for Research

This paper proposes an ethical decision making model for HRD practitioners. While the model includes many factors found in other models, it is different in the following ways:

1. its focus on how the profession may influence ethical resolution efficacy;
2. it suggests the practitioner's philosophy of HRD may affect ethical resolution efficacy; and
3. it proposes that the power and status of the HRD function within the organization may influence efficacy as well.

Additionally, this model introduces the concept of ethical resolution efficacy, which suggests the ability to make ethical decisions in many situations. It will be important to operationalize this concept. One possible means of doing this is through analyses of individuals' ethical reasoning employed when given scenarios depicting various dilemmas facing HRD practitioners.

It is critical for the HRD field to move beyond the descriptive research that has been conducted examining ethical dilemmas facing practitioners. Many of the factors discussed in this paper have been investigated with samples consisting of students, psychologists, and others in business environments. Virtually none of these studies have been replicated using HRD practitioners.

The three factors listed above that distinguish this model from others need to be investigated. For example, does having a philosophy influence one's ability to resolve ethical dilemmas or does a certain philosophical orientation likely to increase ethical resolution efficacy? Do identity issues (e.g., identifying with profession v. identifying with organization in which one work) influence one's ability to resolve ethical dilemmas? Are individuals who have formalized training in HRD ethics, better able to resolve ethical dilemmas than their peers who have not received training? These are just a few of the types of questions that might be researched as HRD scholars begin their investigation.

As the field of HRD matures, concerns regarding professionalization, credentialing, and ethical behavior are likely to increase. The Academy has taken an important first step in presenting its Standards on Ethics and Integrity. It is time to begin a thorough exploration of ethical reasoning and ethical behavior in human resource development.

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Key Ethical Issues for Human Resource Development in the Future: A Delphi Study

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The purpose of this study was to ascertain and gain consensus on key ethical issues facing human resource development (HRD) professionals in the future. Secondary purposes were to identify ethical issues meriting further research and to determine if HRD professionals considered corporate social responsibility an ethical issue to be faced in the future. The Delphi research method was used. The panel of experts arrived at consensus on 41 issues identified as ethical.

Keywords: Ethics Issues, Corporate Social Responsibility, Human Resource Development

America is entering a new economic order (Carnevale, 1991). The new market standards are the result of both economic and social changes in America and around the world. These changes are altering the way we conduct business and even the way the workplace looks. Rapid advances in technology, globalization, downsizing, corporate restructuring, environmentalism, and social responsibility are just some of the factors driving change. Because of the changes, ethical issues are arising more frequently and must be identified and addressed. This new economy presents challenges to American business. New values of environmentalism and social responsibility have already begun the greening of the new economic competition. Moreover, these new values are at the heart of an emerging global consciousness. Honesty, integrity, and service to others are becoming good business (Carnevale, 1991). Little has been done to update or re-define key ethical issues in Human Resource Development (HRD) since McLagan (cited in Rothwell & Sredl, 1992) identified thirteen major ethical issues associated with HRD in 1989. The most recent effort was the AHRD Standards of Ethics and Integrity, where a six-member task force identified general principles that include competence, integrity, professional responsibility, respect for people's rights and dignity, concern for others' welfare and social responsibility. The code also addresses standards that are divided into seven areas: general standards, research and evaluation, advertising and other public statements, publication of work, privacy and confidentiality, teaching and facilitating and resolution of ethical issues and violations (Burns et al., 1999).

Consensus of HRD professionals concerning key ethical issues is necessary if a base for ethics is to be accepted by the profession. If the field of HRD is ever going to be considered a true profession, a standardized code of ethics must be established to govern the field. For a code to be established, a consensus must be reached by HRD professionals regarding identification of key ethical issues. This study attempted to identify and gain consensus on key ethical issues from professionals in the HRD field.

Because of the design of HRD work, knowledge of ethics is important. HRD professionals are often responsible for organizational and individual development. These responsibilities call for assisting individuals in their socialization into the work environment and also for developing organizational codes of ethics. HRD professionals need to broaden their knowledge of ethics so they can assist organizations in achieving their own goals in an ethical manner. To be considered a true profession, it is imperative for a profession to have a code of ethics (Zemke, 1996). At the present time, the field of HRD does not have a standardized code of ethics. Thus, a need exists for a uniform code of ethics to govern the HRD profession.

Theoretical Framework

Ethics has become an area of major concern for America. Every day on the news, we hear about individual and corporate behavior that is unethical. This onslaught of information from the media has created some unrest in the American people as to whether or not business today has morals and values. Society's confidence in the integrity of business and industry has eroded significantly over the past twenty years. In 1968, 70 percent of Americans believed

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that "business leaders were honestly attempting to strike a balance between shouldering appropriate social responsibility and pursuing profits" (Rothwell & Sredl, 1992, p. 189). In 1986, only 20 percent felt that way. The human resource development (HRD) function in an organization is an internal development function that plays a primary role in enhancing the performance and long-term sustainability of organizations. As a function responsible for enhancing organizational effectiveness, HRD has the potential to help cultivate organizations that positively influence communities, society, and the environment (Hatcher, 1997), thus also cultivating ethical organizations. The concept of corporate social responsibility (CSR) is gaining increasing attention. From the literature, it can be argued that CSR is an ethics issue that should be addressed by the HRD field. However, it is not yet clear as to whether or not HRD professionals consider CSR to be an issue.

HRD professionals often have the responsibility of designing company codes of ethics or conduct and training employees on those particular company codes. For this reason, they need to have a working knowledge of ethics and have the ability to train employees to comply with ethics codes or legal requirements (Rothwell & Sredl, 1992). The ethical climate of an organization can affect employee motivation, which in turn affects productivity and employee performance.

Research Questions

The purpose of this study was to ascertain and gain consensus on key ethical issues facing HRD professionals in the future. A second purpose was to determine if HRD professionals considered corporate social responsibility a pressing ethical issue in their field.

The research questions addressed in the study are: What key ethical issues do HRD professionals foresee facing in the future? What is the consensus concerning the perception of the importance of the ethical issues? Do HRD professionals view corporate social responsibility as a pressing ethical issue in the field?

Methodology

This Delphi study was conducted from an interpretivist perspective (Geertz, 1973, 1980). The interpretivist seeks an informed and sophisticated understanding and explanation of actual meanings for study participants–meanings of events, situations, and actions or behaviors. Focus on meaning is central to what is known as the "interpretive" approach or the interpretivist perspective (Geertz, 1973; Maxwell, 1996). By bringing together the individual experiences and expert opinions of a panel of HRD experts, consensus was reached regarding ethical issues to be faced by HRD professionals in the future.

Delphi as a Research Method

The Delphi method was originally developed by the RAND Corporation to predict future military defense needs (Lindstone & Turoff, 1975). The Delphi method is a process for formulating a group judgment for subject matter where conclusive information is lacking (Cochran, 1983). Delbecq, Van de Ven, and Gustafson (1975) define the Delphi method as "a method for the systematic solicitation and collection of judgments on a particular topic through a set of carefully designed sequential questionnaires interspersed with summarized information and feedback of opinions derived from earlier responses" (p.10). It is useful in gathering data from subject-matter experts without requiring face-to-face contact. The method was especially useful in this study because it helped pool the opinions of a group of HRD experts from across the country without getting them together or forcing the researcher to travel to the different experts' locations to gather data.

The Delphi procedure consists of gathering individual answers to pre-formulated open-ended questions usually by questionnaire, using multiple rounds of questionnaires where the information feedback between rounds is carefully controlled by the researcher, and presenting statistical group responses (Cochran, 1983).

Appropriateness of the Delphi

Lindstone (1975) states that one or more of the following applications call for the use of the Delphi method. The problem does not lend itself to precise analytical techniques but can benefit from subjective judgments on a collective basis. The individuals needed to contribute to the examination of a broad or complex problem have no history of adequate communications and may represent diverse backgrounds with respect to experience or expertise. More individuals are needed than can effectively interact in a face-to-face meeting. Time and costs make frequent group meetings difficult. A supplemental group communication process can increase the efficiency of face-to-face meetings. Disagreements among individuals are so severe that the communication process must be refereed or assured anonymity. The heterogeneity of the participants must be preserved to assure validity of the results; i.e., avoidance of domination by quantity or by strength of personality (bandwagon effect).

The major disadvantage or limitation of the Delphi method is the selection of participants. The sample must include those who are willing to participate, familiar with the subject matter, willing to donate their time, and at the same time, capable of being randomly selected in the interests of validity (Cochran, 1983).

Delphi Procedures

The Delphi method begins with identifying a group of individuals who have knowledge of the subject under study (Cochran, 1983). After the potential panel members are identified, a request to participate is issued. The researcher contacts potential panel members and explains the Delphi method. Included in the explanation is information regarding the subject of the study and the amount of time required for participation. The request includes the characteristics of the Delphi method and assures anonymity for each member. According to Uhl (1983), the request to participate should be extended by someone whom the individuals respect and should include the importance of the study.

Upon identification of the panel of experts, the researcher then uses multiple rounds of questionnaires to collect data (Murry & Hammons, 1995). The first round typically uses open-ended questions to obtain opinions of a panel of experts regarding a particular topic or issue under study. Murry and Hammons describe this round as an "anonymous brainstorming session" (p. 424). After the questionnaires are returned, the researcher analyzes the data and uses that analysis to design the questionnaire for the next round. In this round, participants are asked to rate or rank, to edit and to comment upon the responses from the initial round. Most often, participants are asked to rank the items using a Likert scale. Upon receipt of the second round of questionnaires, the researcher conducts statistical analysis, most often computing frequency distributions, means and standard deviations (Murry & Hammons, 1995). Cochran (1983) uses the median and indicates that the Delphi responses should tend to move more toward the median with each administration of a Round II type questionnaire.

Sample Selection

The population for this study was the Academy of Human Resource Development (AHRD). Systematic sampling was used to select expert panel members through the use of a random table of numbers. Because attrition was likely to occur, it was decided to include 100 participants in the original sample. One hundred AHRD members were selected, contacted by electronic mail (e-mail) and asked to participate. Sixty-five agreed to participate.

Data Analysis

The Round I instrument yielded 359 responses from 51 respondents. Sixty-four issue statements were identified from the responses to the open-ended question in Round I. The Round II questionnaire consisted of the 64 issue statements along with an added five-point Likert scale. The Delphi panel was asked to rate each issue statement indicating its level of importance within the field of HRD in the future with 5 indicating Very Important and 1 indicating Very Unimportant.

As a result of comments from participants after Round II, the researcher revised the questionnaire. The Round III questionnaire included 65 issue statements with two parts for each issue: 1) Is this an ethical issue? and 2) If yes, how important is the issue? Simple majority of the panel members indicated that 41 of the 65 issue statements were future ethical issues in the field of HRD. The ratings of the issues were statistically analyzed to determine frequency distributions, means and standard deviations. Round IV was sent to 10 panel members whose ratings did not fall within the range of the majority. Those panel members received their individual scale responses and the group responses for each item in which their responses differed from the majority. They were then given an opportunity to revise their individual scale response based upon any new insights or upon review of the statistical group response.

Findings

Analysis of the Round I Questionnaire Responses

The 51 questionnaires returned in Round I were used to identify a list of future ethical issues. The questionnaires yielded 359 raw responses to the question: What key ethical issues or dilemmas do you foresee HRD professionals facing in the future? The raw responses were then coded by three graduate students using selective coding (Strauss & Corbin, 1990). The researcher then analyzed the codings, which resulted in 23 categories displayed in Table 1.

Table 1 Round I -- Analysis of Categories

	Categories	# of Times Mentioned
1.	Honesty, integrity, professionalism/accountability	68
2.	Program development, training vs nontraining interventions, training for training sake	64
3.	Skills/knowledge/expertise	57
4.	Personnel issues	51
5.	Cultural/ethnic diversity/globalization	39
6.	Social issues	39
7.	Balance	33
8.	Inappropriate use of data	33
9.	Technology	33
10.	Research	30
11.	Worker/learner	30
12.	Bottom line	24
13.	Strategic alignment	24
14.	Changing role of HRD professional	21
15.	Program evaluation	18
16.	Setting fees	18
17.	Management	18
18.	Certification	12
19.	Work environment	12
20.	Organizational change	12
21.	Academia	12
22.	Intellectual property	9
23.	Professional liability insurance	6

The researcher analyzed the data further, using the 23 categories to assist in the elimination of duplication and repetition. This analysis resulted in 64 issue statements. A Likert scale was added to the 64 issue statements to create the Round II questionnaire. The participants were asked to indicate the level of importance of the future ethical issues within the field of HRD by selecting a rating from the Likert scale following the issue statement, a point scale ranging from one to five, with five indicating very important and one indicating very unimportant.

Analysis of the Round II Data

Of the 51 Round II questionnaires sent, 43 were returned. Upon receipt of responses to Round II, the researcher statistically analyzed each item from the questionnaire to determine a measure of central tendency and a measure of variability. Statistical analysis was conducted using SAS. For each questionnaire item, frequency distributions, means and standard deviations were computed. However, after analyzing comments made by the panel members, the researcher determined that revisions to the Round II questionnaire were necessary to gather the appropriate data. Issue #12 (dealing with uncooperative and/or unmotivated employees) was criticized for being two issues in one statement. Panel members had also commented that some of the issue statements listed were not ethical issues but rather were roles and responsibilities of the HRD professional. For this reason, the researcher deemed it necessary to revise the questionnaire.

Analysis of the Round III and Round IV Data

The Round III questionnaire included each item from Round II with one additional issue resulting from the split of issue #12. Participants were asked to make two determinations for each issue: 1) Is this an ethical issue? and 2) if so, how important is it? Of the 43 Round III questionnaires sent using electronic mail (e-mail), 31 were returned. Using SAS, each item was statistically analyzed to determine which issues were considered by simple majority to be future ethical issues in the field of HRD. Also computed were frequency distributions, means and standard deviations. Round IV was sent to the 10 panel members whose ratings did not fall within the range of the majority. Participants received their individual scale responses and the group responses for each item in which their responses differed from the majority. They were then given an opportunity to reconsider their individual scale response based upon any new insights or upon review of the statistical group response. Of the 10 Round IV questionnaires sent via e-mail, nine were returned. Using SAS, each item was statistically analyzed to determine frequency distributions, means and standard deviations. The issue statements whose analysis changed are noted by asterisk (*) in Table 2 and Table 3. Table 2 shows 25 of the 41 issue statements identified by the majority of the panel members as future ethical issues. The means of these 25 issues ranged from "4" (important) to "5" (very important).

Table 2 Round IV -- Important to Very Important Ethical Issues (descending order by Mean)

Issue	N	Mean	SD
1. Recognizing people/employees as valuable resources to organizational survival.	21	4.71	.56
23. Maintaining appropriate confidentiality.	31	4.61	.72
45. Using power appropriately.	29	4.59	.57
24. Maintaining professional honesty and integrity in practice, research, and teaching.	30	4.57	.73
25. Setting a leadership example.	17	4.53	.80
49. Respecting the rights, dignity, and worth of all people.	30	4.47	.78
*10. Ensuring fairness in hiring, terminating, promoting, and developing employees in a vastly diverse workforce.	30	4.40	.81
4. Balancing organizational and individual needs and interests.	23	4.39	.66
2. Balancing the desire of management to see financial, bottom-line results with people-oriented and people-friendly policies and practices.	25	4.36	.70
9. Respecting copyrights, sources, and intellectual property.	29	4.31	.89
8. Using data appropriately.	31	4.29	.86
*39. Applying evaluation findings in a fair and ethical manner.	30	4.23	.90
*63. Balancing the conflicting organizational demands of humanistic concerns and economic outcomes.	30	4.23	.82
35. Developing valid and reliable diagnostic instruments when none are available.	17	4.12	.86
40. Promoting a more humane workplace.	25	4.12	.83
52. Working within the scope of one's competence.	26	4.12	.71
41. Creating a learning environment that meets the needs of the organization and accommodates employee learning styles and abilities.	18	4.11	.58
*29. Managing personal biases.	28	4.11	.79
31. Being sensitive to the direct and indirect effects of interventions and acting to address			

negative consequences.	25	4.08	.86
15. Avoiding age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status discrimination.	29	4.07	.92
*21. Ensuring that training or non-training interventions meet the customer/organization's needs.	27	4.07	1.04
*22. Ensuring that training or non-training interventions are well informed by or grounded in sound theory.	28	4.07	.81
53. Responding to changing HRD roles and responsibilities through continuous, research-based professional development.	18	4.06	1.11
34. Selecting appropriate diagnostic instruments.	21	4.05	.86
56. Showing respect for, interest in, and representation of individual and population differences.	27	4.04	.76

The means from the 25 issues listed in Table 2 ranged from the "4" (important) to "5" (very important) range. As a result of Round IV the mean of issue #22 increased to 4.07, moving it into the important to very important range. Although means of other issues increased, only issue #22 changed enough to move it to a different category. Table 3 shows 16 of the 41 issue statements identified by the majority of the panel members as future ethical issues. The means of these 16 issues ranged from "3" (moderately important) to "4" (important).

Table 3 Round IV -- Moderately Important to Important Ethical Issues (descending order by Mean)

Issue	N	Mean	SD
42. Using technology appropriately in regard to copyright, privacy, access to information, and knowledge management issues.	30	3.97	.81
*32. Rejecting inappropriate requests.	27	3.93	.92
61. Assisting organizations in balancing the good of the organization with the good of the community.	30	3.93	.78
26. Avoiding conflicts of interest.	28	3.89	.79
*64. Addressing work/life balance issues of the worker.	25	3.84	1.03
28. Using subject matter experts effectively as related to labor laws, civil rights, safety, machine operation or other legal issues.	18	3.83	.92
55. Addressing diversity in the workplace.	25	3.80	.82
*27. Documenting efforts to facilitate the provision of services, ensure accountability, and meet institutional and legal requirements.	19	3.79	1.27
57. Understanding the essences of other cultures and ensuring that they are integrated into our theories and knowledge base.	19	3.79	.92
65. Managing tension between change and individual rights and dignity.	28	3.79	.92
14. Determining when and under what conditions to stop investing in people.	18	3.78	.94
*33. Maintaining HRD role competence.	18	3.78	1.06
58. Accommodating multicultural differences in a globalized work environment.	22	3.77	.81
*43. Accommodating employees' differing skill levels and accessibility to technologies.	17	3.65	.86
*62. Furthering a social justice agenda.	22	3.36	1.00
*3. Pricing products and services fairly.	21	3.33	.91

Summary of Findings

According to this Delphi panel of experts, there are several ethical issues facing HRD professionals. Fifty-one panel members responding to Round I identified 359 raw responses to the question: What key ethical issues or dilemmas do you foresee HRD professionals facing in the future? The 359 raw responses were categorized using selective coding. Twenty-three categories were identified to assist the researcher in eliminating duplication and repetition.

Round III resulted in the elimination of 24 of the 65 issue statements. The issue statements dismissed as not being ethical were consistent with the roles and responsibilities of the HRD professional as defined by Rothwell and Sredl (1992) in The ASTD Reference Guide. Those issues eliminated included developing appropriate methods of retention, maintaining quality work force, evaluating HRD policies and practices, ensuring that management understands and supports HRD issues and activities, providing timely, equitable, and efficient employee training, identifying well-qualified consultants, and preparing organizations for strategic alignment. The findings regarding the issues dismissed as not being ethical were expected. However, the researcher did not expect to see so many of the panel members not agreeing that certification or setting standards for the profession were ethical issues to be faced by HRD professionals. Eighty-one percent of panel members responded that licensing or certification of the HRD profession is not a future ethical issue. Sixty-eight percent responded that determining qualifications and requirements for certification is not a future ethical issue, and 58 percent responded that setting standards for the profession is not a future ethical issue.

The principles in the AHRD standards are not as specific as the issues identified in this study. Also included are general standards (boundaries of competence, maintenance of expertise, basis for research and professional judgments, description of HRD professionals' work, respecting others, nondiscrimination, exploitative relationships, misuse of HRD professionals' work, multiple relationships, consultations and referrals, third party request for services, delegation to and supervision of subordinates, documentation of professional and research work, records and data, fees and financial arrangements, accuracy in reports to payers and funding sources and referral fees), research and evaluation, advertising and other public statements, publication of work, privacy and confidentiality, teaching and facilitating, and resolution of ethical issues and violations.

Round III resulted in the identification of 41 future ethical issues facing HRD professionals. The issues were similar to those identified by McLagan in 1989. In fact, all but one of McLagan's issues were addressed in the 41 issues identified by the panel of experts. The one issue not mentioned by this study's panel of experts was ensuring customer and user involvement, participation, and ownership. Issues relating to personnel that were not addressed by McLagan included: Ensuring fairness in hiring, terminating, promoting, and developing employees in a vastly diverse workforce (4.40); determining when and under what conditions to stop investing in people (3.78); and avoiding age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status discrimination (4.07). These issues were probably not addressed by McLagan because much of the legislation regulating many of these issues occurred after the conclusion of her study. Adding to the dilemmas are issues such as religion and sexual orientation, which are not regulated by law and which have come to the forefront since McLagan's study. McLagan (1989) also did not address social issues. Social issues identified in this study included: Respecting the rights, dignity, and worth of all people (4.47); recognizing people/employees as valuable resources to organizational survival (4.71); balancing the conflicting organizational demands of humanistic concerns and economic outcomes (4.23); assisting organizations in balancing the good of the organization with the good of the community (3.93); promoting a more humane workplace (4.12); furthering a social justice agenda (3.36); addressing work/life balance issues of the worker (3.84); and managing tension between change and individual rights and dignity (3.79). However, the literature and the findings of this study suggest a move toward a greater awareness of social responsibility.

McLagan's study also did not address ethical issues relating to technology. There have been many advances in technology since 1989 when McLagan published her 13 major ethical issues. Today's technological advances enable information and events around the world to be transmitted instantaneously. The panel of experts from this study identified using technology appropriately in regard to copyright, privacy access to information and knowledge management issues (3.97) as being a future ethical issue.

Conclusions and Implications

The issues identified in this study seem to reflect the new economic order into which America is entering. They seem to suggest an increase in ethical issues resulting from increased technology, globlization, corporate social responsibility, corporate restructuring and downsizing, and environmentalism.

Consensus was clearly reached regarding the importance of the ethical issues identified by the panel of experts. Once panel members were given the opportunity to determine whether or not the original issue statements were future ethical issues in Round III, consensus did not seem to be much of an issue. HRD professionals seem to be in agreement about key ethical issues such as recognizing people/employees as valuable resources to organizational survival, maintaining appropriate confidentiality, using power appropriately, maintaining professional honesty and integrity in practice, research and teaching, setting a leadership example and respecting the rights, dignity, and worth of all people.

From the data, the researcher determined that HRD professionals do consider social responsibility to be a pressing ethical issue. Issues identified as ethical issues facing HRD professionals related to social responsibility included promoting a more humane workplace (4.12), respecting the rights, dignity, and worth of all people (4.47), balancing the conflicting organizational demands of humanistic concerns and economic outcomes (4.23), assisting organizations in balancing the good of the organization with the good of the community (3.93), furthering a social justice agenda (3.36), addressing work/life balance issues of the worker (3.84) and managing tension between change and individual rights and dignity (3.79). The literature and the findings of this study suggest a move toward a greater awareness of CSR. Social issues were discussed in AHRD's Standards on Ethics and Integrity.

How This Study Contributes to New Knowledge in HRD

By identifying ethical issues in the field of HRD, the researcher hopes to assist in updating out-of-date research and in validating recent attempts at developing codes of ethics such as AHRD's Standards of Ethics and Integrity. Data gathered in the study will also contribute to the basis needed to establish a standardized code of ethics for the HRD field. Information obtained from this study will also provide valuable information that will assist HRD professionals in redesigning their roles and activities regarding ethics while at the same time establishing and identifying ethical issues that merit further research. Finally, this research suggests a move toward a greater awareness of CSR. The literature and the findings of this study indicate that social issues are considered pressing ethical issues to HRD professionals. It is recognized that this study is limited to consensus gathered from a small group of HRD professionals. Further research is necessary regarding the link between HRD and CSR.

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The Social Responsibility Performance Outcomes Model

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Few Performance Improvement (PI) and Human Resource Development (HRD) models and processes addressed specific outcomes or identified needs and outcomes at the societal or environmental levels. This paper proposes a new conceptual model for HRD and PI scholars and practitioners that addresses the critical need to develop PI and HRD interventions that are socially and environmentally responsible.

Keywords: Performance Improvement, Corporate Social Responsibility, Performance Improvement Models

While our world seems to shrink, companies expand and grow stronger. For the first time in recorded history, corporations are more powerful than many governments (Estes, 1996; Korten, 1995). Corporate power has the potential to greatly benefit society or drive a wedge between society and organizations. Thus, the impact that organizations have on employees, stakeholders, communities, society, and the environment is becoming more evident and, in many cases, more contentious.

Responsible companies need all available resources to meet the complex needs and challenges posed by the public, communities, the environment, and society. One proven resource in enhancing organizations and organizational performance, is the combined implementation of the functions of performance improvement (PI) and human resource development (HRD). These two functions have a tremendous opportunity and responsibility to aid in developing socially responsible companies.

To improve performance is to identify the system or subsystem requiring improvement and focus the analysis on outcomes. As long as outcomes are identified and clarified at appropriate societal and environmental levels then performance improvement has the potential to enhance corporate social responsibility. Because of the lack of focus on corporate social responsibility in business and industry and in the HRD and PI literature, the purpose of this paper is to propose a conceptual model of corporate social responsibility (CSR) from a performance outcomes perspective. The problem is that most applied processes and theoretical models do not address nor define outcomes *per se*. They focus primarily on economics and are noticeably silent on the impact of these models at both societal and environmental levels.

Theoretical Framework

The relationship between HRD theory, practice, and outcomes remains controversial and ambiguous (Hatcher, 1998). While the relationship of theory and practice has generated moderate discussion (Swanson & Holton, 1997), inadequate attention has been given to the relationship between theory, practice, and outcomes of HRD, especially societal-level outcomes. This theoretical model is conceptualized from the empirical and atheoretical research literature on HRD and social outcomes (Kaufman, 1992, 1997; Hatcher, 1997, 1998).

An assumption that was made in developing this model was that current management practice should and in many cases does require organizational leaders to look beyond simple economics and address organizational responsibilities to communities, societies, and the environment. Although some corporate leaders and a few HRD scholars and practitioners criticize the notion of corporate social responsibility as being unrealistic or unnecessary, many others believe that being socially and environmentally responsible does not detract from corporate profits. In fact, empirical research shows that companies that are considered socially responsible are at least as competitive as organizations that are not, and will remain sustainable over a long time period (Pava & Krausz, 1995; Tichy, N.M., McGill, A.R. & St. Clair, L, 1997).

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Methodology

The methodology used was a conceptual analysis based on a review of related HRD and performance improvement literature. Studies published between the 1970's and the present were reviewed for inclusion of social influences, outcomes, theoretical models, and related terms. Additionally, action research methods were pursued in two service-oriented organizations over a one year time period in an effort to identify conceptual themes and emergent constructs related to outcomes and corporate social responsibility. The action research approaches used included establishment of a project to incorporate social responsibility as an organizational performance outcome, identifying a project team consisting of line and functional managers, HRD personnel and the researcher, and creating action learning dialogue meetings for questioning, listening, and critical reflection (Pedler, 1991). Results were synthesized into a performance outcomes conceptual model designed to enhance corporate social responsibility through human resource development and performance improvement.

The Performance Outcomes Conceptual Model

Although there are certainly socially and environmentally responsible organizations, few PI and HRD models and processes were identified that address specific outcomes or identify needs and outcomes at the societal or environmental levels. Because of this omission, it is imperative that new concepts and models that provide better guidance on how to incorporate societal and environmental outcomes are developed and discussed. Assumptions for the present study include (a) corporate social responsibility is not a consistent outcome that most organizations and HRD or PI address, (b) organizations are responsible beyond economic responsibility, and (c) conceptual models are beneficial and provide an originating point for research and further consideration.

To insure that PI and HRD professionals are competent and therefore successful in their endeavor to improve CSR, it is important to develop better definitions of the role of PI and HRD in creating socially responsible companies. This can only come through active discussion and creative development of new conceptual models that focus on needs and outcomes at the societal and environmental levels.

The role of PI & HRD in CSR

To better understand how HRD and PI influence CSR it is important to acknowledge that (a) concepts/models based on theory are the foundation of HRD and PI research, and (b) that applied models are the basis for PI and HRD practice. Although most logic-based models are "too superficial" to explain the dynamics of organizational performance (Swanson, 1999, p.9), conceptual models that combine action learning and applied theoretical frameworks can provide a starting point for multidisciplinary approaches to organizational and societal change. A conceptual model is a theoretical representation of an applied or empirical procedure for solving a problem. What is missing from conceptual approaches is testing of validated relationships between components or variables. In order to characterize and eventually test variables, HRD/PI professionals must construct and mutually agree on specific "outcomes". Additionally, the success of any conceptual or applied model depends on how well the model's primary components and concepts are defined.

Although identified as a component of performance, outcomes are not an integral part of many commonly used performance improvement and HRD theoretical and applied models. The current model evaluates the extent that an intervention meets needs established during a needs assessment. These needs are generally addressed only at the individual, process, and organization levels of performance. Figure 1 illustrates a common performance improvement model. Also, the importance of the role that definitions of concepts such as CSR play in making meaning and providing guidance in research and practice must also be acknowledged.

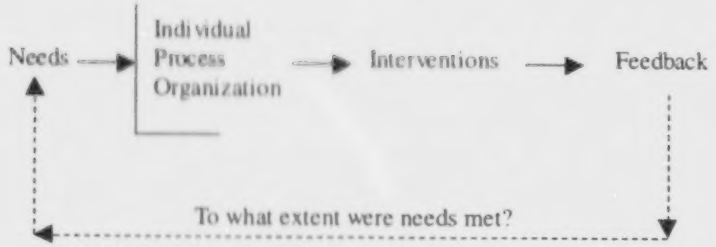

Figure 1. Common performance improvement model

Applied models such as the one illustrated above, although utilitarian, do not identify outcomes as a primary component, nor do they give specifics on what outcomes or results are expected or desired. Thus, interpretation of outcomes or results is left up to the user and may be inconsistent with needs. Furthermore, needs are generally identified only at the individual, process, and organizational levels. No common or readily identifiable models appeared to address CSR as a need or outcome.

It is ironic that neither performance improvement models nor common definitions of performance address outcomes or results for any particular reason nor identifies for whom or for what. According to Holton (1999) each profession views and defines performance differently. To date, HRD and PI have chosen to limit performance in terms of how it can impact people, processes, or an organization with little regard for communities or society.

Examples of popular performance improvement models include Rummler and Brache's (1995) individual, process, and organizational levels of performance, and Robinson and Robinson (1995), who identified performance improvement at the individual and organizational levels. Kaufman (1992) and Hatcher (1997) are two of the few authors/researchers that include societal level impact of PI and HRD in their published conceptual models.

Examples of definitions of performance include Brethower (1995), who defined performance as "a set of actions that accomplishes something, that yields a result" (p.23), and Swanson (1999) who defined it as "the valued productive output of a system in the form of goods or services" (p.5).

Without more complete models and better definitions of outcomes, PI and HRD efforts have no ethical framework, no way to consistently measure effects of interventions on society or the environment. Without such models to guide PI/HRD efforts outcomes may even be harmful to people and society. Without a focus on desirable and socially responsive outcomes, PI and HRD may never reach their potential of establishing productive and caring people and organizations that enhance society and the environment.

The Social Responsibility Performance Outcomes Model

Presently, PI and HRD professionals and academics view corporate social responsibility as either part of a mega-planning process (Kaufman, 1992; Kaufman, 1997), a strategic planning process (Hatcher, 1997), or as a part of HRD's theoretical foundations (Hatcher, 1998). Like the evolution and recognition of evaluation in PI and HRD, it is time for CSR to take its rightful place as the focal point of PI and HRD outcomes. In support of this need, Holton (1999) recently called for an integrated model of performance domains that may reflect an organization's relationship with society.

To illustrate the concept of societal needs and outcomes, Figure 2 is offered as a performance improvement model with corporate social responsibility (CSR) as its focus. The Social Responsibility Performance Outcomes Model uses the same basic components of a universal PI process with an expansion of needs and the addition of outcomes. Needs are expanded to include community, societal, and environmental levels. Outcomes are specified at individual, process, organization, community, society, and environmental levels.

The model expands on common PI/HRD approaches since it addresses more holistic needs in terms of community, society, and the environment. For example, a typical needs assessment that focused on individual or organizational skills and knowledge could be expanded to include needs at the community, societal, and environmental levels.

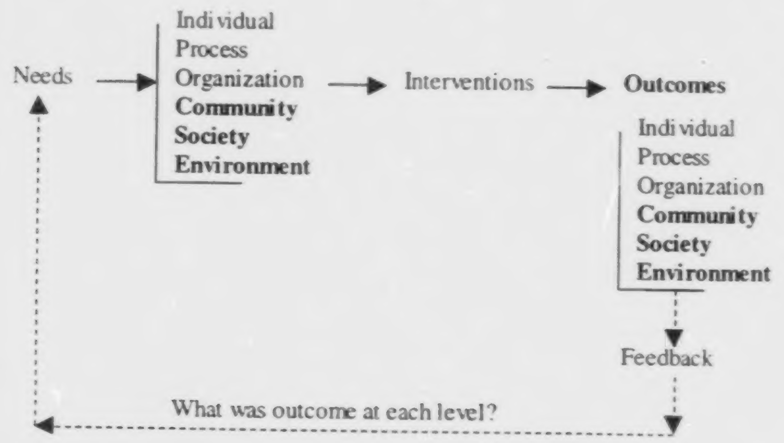

Figure 2. Social Responsibility Performance Outcomes Model

In other words, the skills or knowledge that might be required to communicate with and develop the community, society, and the environment are identified. Once needs are established, interventions to address community, societal and environmental needs are designed and implemented. After implementation of applicable interventions, each level of performance is evaluated in terms of impact at each level, i.e., outcomes. For example, as part of an action research project, an organization completed a needs assessment and found that their reputation in the community had declined due to a general lack of communication around pollution and waste control. The company decided to invite community leaders to their next series of training in environmental management as well as hold a public forum on company activities around pollution control. Finally, feedback on the company's response was sought from the community through surveys and focus groups. Without the guidance of an applied performance improvement model requiring the company to address community needs, the decline in reputation could have escalated and evolved into a detrimental financial problem.

The success of a performance improvement model is partially dependent on how well primary components and concepts are defined. As stated previously, current and accepted definitions of performance are restricted. A more comprehensive definition of performance is needed if outcomes are expected beyond the individual, process, or organization levels. If performance improvement of communities, society, and the environment is desired, then a more holistic definition of performance than is currently available is needed. Performance is therefore defined as *outcomes of a systematic approach to positive and desired changes in the individual, processes, organization, community, society, and the environment.*

To establish the validity of a new concept or idea, conceptual models must be tried out. To date, the model described herein has been tested in two organizations with disappointing results. The first organization was a not-for-profit service organization with a primarily socially responsible mission. Thus, acceptance of the socially responsible outcomes model was less invasive than in the second organization which was a firm with a history of human rights concerns and a strong socially responsible mission statement. Management in the first organization agreed that the model "had merit", but implementation was inadequate because the concepts were never integrated into operational or tactical plans as required to validate the model. The second firm's operations manager had initially embraced the conceptual model and was considering implementation in two locations when external economics forced several location closures and thus the termination of the project. Although application and validation of the Social Responsibility Outcomes Model has been less than favorable, the author continues to apply components of the model in every interaction and consultation with business and industry. Eventually, the model will be validated and hopefully viewed as beneficial in insuring organizational social as well as economic success.

Outcomes are not a part of commonly accepted PI and HRD models. Additionally, common performance improvement and human resource development models are primarily limited to influences on individuals, processes, and organizations. New PI and HRD models are needed that focus on outcomes at the community, societal, and environmental levels. The Social Responsibility Outcomes Model described herein offers PI and HRD professionals a starting point, to positively impact the social responsibility of corporations within which they work and have influence.

Conclusions and Closing Thoughts

Organizations must assume more responsibility for their impact on communities, society, and the environment. "Organizations have to take social responsibility. There is no one else around in the society of organizations to take care of society itself. Yet they must do so responsibly, within the limits of their competence, and without endangering their performance capacity" (Drucker, 1993, p.97). Organizations must also understand that in the 21st century, they will be "intertwined with global political, social, and environmental issues that will force them to redefine their role" (Tichy, McGill, & St. Clair, 1997, p. 4).

As organizations endeavor to prepare for the future, PI and HRD has an opportunity to assume a leadership role in helping them enhance their social responsibility through development of more appropriate PI/HRD models and definitions. The performance improvement model and definition of performance described in this paper offer an advance in PI and HRD designed to focus needs and outcomes at the community, society, and the environmental levels.

The late Dr. Malcolm Knowles said that "any system, whether economic, environmental, or social can be seen as a system of learning...and when we understand this we perceive education in a different way" (M. Knowles, personal communication, April 8, 1995). HRD and PI are about educating, training, developing, and changing performance. What is currently required is a refocus on desirable and sustainable corporate needs and outcomes that enhance communities, society, and the environment.

In today's robust economic climate environmentalism, community development and other socially responsible interventions are abrogated to the economic "bottom line". Firms appear oblivious to the fact that the current myopic focus on profit with little or no consideration for other than economic responsibilities may have negative consequences to individuals, organizations, communities, the ecosystem, and society in the not so distant future. Therefore, performance improvement and human resource development professionals must recognize that "only those companies that manage to contribute to and sustain the communities in which they operate will be able to remain acceptable organizations in the public's eye in the 21st century and beyond" (Tichy, McGill, & St. Clair, 1997, p. 369). If the right conceptual and practical choices are made today, HRD and PI can be instrumental in enhancing corporate social responsibility and thus insuring that life on Earth is protected and developed for future generations to come.

How this model contributes to new knowledge in HRD and Performance Improvement

Conceptual models are the intellectual underpinnings of HRD and PI research and practice. They provide a starting point for multidisciplinary approaches to organizational and societal change. Since outcomes are not a part of commonly accepted PI and HRD models, and since social, environmental, and community-based problems are ubiquitous in nature and monumental in complexity, new PI and HRD models are needed that focus on outcomes at the community, societal, and environmental levels. The Social Responsibility Outcomes Model described in this paper offers the HRD and PI community a starting point to positively impact the social responsibility of the organizations, in which they work and have influence.

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The Role of Feedback in Management Development Training

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This survey-based study investigated the role of feedback in nine management development training settings in a British government agency. Distinguishing among different sources and types of feedback as provided by the instructors and sought by the participant, the results of this study suggest that participants sought information about their performance frequently and from a variety of sources. Instructors tended to overestimate the importance of the feedback they provided. The amount of feedback sought was related to judgements of relevance of the training and on the teaching styles employed by the instructors. The study indicates the feedback seeking is important in the process of management development training. The implications of these findings for further research and the practice of management development are discussed.

Keywords: Management Development, Feedback, International HRD

Management training and development ranks among the most frequently provided types of training. Research results of a nation-wide study in the United Kingdom in 1999 (Institute of Personnel and Development, 1999) revealed that among 400 randomly selected private and public organizations it ranked first with over 75% of organizations providing "a lot" of management training and an additional 20% providing "some". In the United States, it ranks second in frequency after new employee orientation with 93% of companies providing this kind of training (Bassie & Van Buren, 1998). Management training and development (MD) is broadly defined as "the attempt to improve managerial effectiveness through a planned and deliberate learning process" (de Bettignies, 1975, p. 4); the two most important goals of MD programs, according to a survey by the Conference Board are to develop leadership skills in managers and to insure a pool of capable people to run the organization (Walter, 1996). MD typically includes training in areas such as performance appraisals, implementing regulations and policies, managing projects and processes, and planning and budgeting (Bassie & Van Buren, 1998) and is directed to broad range of employees ranging from first-line supervisors and team leaders to mid-level managers. MD is distinct from executive development which is usually targeted towards current and potential senior executives and focuses on corporation-wide initiatives or major business units and includes strategic planning, policy making, and goal setting (Bassie & Van Buren, 1998).

The demand for MD has been attributed to the flattening of organizations and the broadening of job roles at many levels. Leadership behavior is no longer seen as the domain of a select few at the top of the organizational hierarchy but is required at all levels. Almost any individual in an organization, as Van de Ven and Grazman (1995) observed, "may act as a leader ....Because the sharing of influence increases the quality of the decisions and the motivation of organizational participants, [it is proposed that] the more influential acts (i.e.leadership) are widely shared in an organization, the more effective the organization" (p.7).

While much has been written about the importance of management and leadership skills (for the purpose of this paper, both terms will be used interchangeably, conceptual discussions over their differences notwithstanding), there is less research about the content of MD and even less about the process of MD. This paper will report the results of an empirical study conducted in a series of MD settings focusing on one key instructional process element, feedback.

Feedback is a classic concept in the social sciences and has been the focus of research in fields ranging from control theory and cybernetics to psychology and education. Feedback has been defined as a " special case of the general communication process in which some sender...conveys a message... to a recipient" (Ilgen, Fisher, & Taylor, 1979, p. 350) related to some aspect of the recipient's behavior. Feedback is seen as critical for the functioning, maintenance, and adaptation of individuals, groups, or organizations because it provides information about the system's current state compared to some standard (Taylor, Fisher, & Ilgen, 1984). Without feedback, goal attainment would be improbable and action haphazard and random.

Feedback is a key component of any learning process. Successful training programs incorporate feedback as an instructional design element (Goldstein, 1993; Kovitz & Smith, 1985) and also during instructional delivery to

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increase learning and the transfer of learning (Schoenfeldt, 1996). Recent research articles have addressed the role of feedback in different training and education settings, for instance in industry training (Viau & Clark, 1987), for supervisors providing in-service staff training (Parsons & Reid, 1995), and in college and university education settings (Dunkins & Precians, 1992, Brinko, 1993).

The focus of this study was a particular aspect of feedback, the process of feedback seeking by participants of MD programs. Feedback seeking has been described as process by which actors purposefully and actively seek to obtain information to "determine the adequacy of behaviors for attaining valued end states" (Ashford, 1986, p. 466). In a comprehensive review of the literature related to feedback seeking, Madzar (1995) asserted the importance of the concept for HRD practice and suggested its important role for training in general and management development in particular.

Feedback seeking research is based on the premise that employees continually engage in a process of seeking information about two aspects of their behavior: which goals to pursue (how to direct their energy) and what progress they make toward these goals. They seek this information frequently, in a variety of ways, and from a variety of sources. Whereas traditional feedback research has treated the receiver of feedback in a relatively passive role, researchers in feedback seeking ascribe a very active role to the individual and "toss the ball into the seeker's court. That is, they denied the assumption that individuals are passive recipients of feedback ...and proposed that individuals actively seek feedback in order to have more control over the outcomes of their behavior" (Madzar, 1995, p. 337).

This current study was built upon the assumption that individuals self-regulate to a large extent (Bandura, 1986) and are actively involved in seeking information to monitor their progress towards specific goals. Management development programs are especially well suited to investigate feedback seeking because they present novel situations for participants who are advancing in an organization. New behaviors, knowledge, and skills are introduced which are of importance to employees who will assume new levels of responsibility. MD often serves as a rite of initiation and signals impending enhanced status and responsibilities. One key dimension of leadership is what Conover (1987, p. 585) termed "managing self" which includes monitoring progress towards goals and evaluating one's skills, strengths, and weaknesses. Feedback seeking behavior is an important source of information with regard to this dimension.

Research Questions and Review of the Literature

The study addresses four overall research questions:

(1) What information sources did participants use when seeking feedback on their performance?,
(2) What individual antecedents affected feedback seeking?
(3) What instructor-related antecedents affected feedback seeking?, and
(4) What outcomes are related to feedback seeking?

Feedback Sources

The first question addressed the types of feedback sources that participants made use of to seek information about their performance during MD. Previous research (Van Dyne, 1992) has established three categories of sources of information for feedback seeking in work situations: constituencies (e.g., supervisors, coworkers, customers, subordinates), systems (e.g., tasks, work systems, job aids), and the self (one's own thoughts and feelings). The relative importance of each source to the information seeker, however, has not been clearly established. Greller's (1975) seminal study on feedback sources, for instance, showed that employees rated their supervisors as the most important source, while Hanser & Muchinsky (1978) found that employees rated their own assessment (self) as the most important feedback source. Related to assessing one's performance, self-generated information has been shown to be most frequently accessed (Greller & Herold, 1975). In fact, feedback research has shown with fair consistency, that psychologically closer sources of information, such as the self, the task, and one's peers, are most often accessed when seeking feedback, are seen as most reliable, and as easiest to obtain (Van Dyne, 1992). Extending this research to MD settings, it is important to understand what sources of feedback participants perceive as important and useful.

Individual Antecedents

The second research question centers around the individual-level antecedents of feedback seeking behavior. While many individual level variables have been proposed as potential antecedents, only a few have been substantiated in empirical studies. These are an individual's tolerance for ambiguity, which is negatively correlated with feedback seeking, an individual's goal orientation (Madzar, 1995), and an individual's organization-based self-esteem (OBSE) which is positively correlated. Because OBSE is dependent on performance within an actual work context and might not apply in a learning setting such as MD, it was excluded from this study. Only tolerance for ambiguity and goal orientation were investigated as potential antecedents.

The literature reports negative relationships between feedback seeking and tolerance for ambiguity: individuals with a lower tolerance to ambiguity engage in more feedback seeking behavior to gain certainty about their performance (Ashford & Cummings, 1985).

Instructor-related Antecedents

Previous research (Madzar, 1995) had found that employees seek information more often from supervisors who are acting as role models, who pay individual attention to each employee, and who challenge employees to think critically. This leader behavior, known as charismatic or transformational leadership in the leadership literature, has been proposed to also apply to education and training situations (Walumbwa & Kuchinke 1999).

Reactions to Training

The fourth research question addresses the question of the effects of feedback seeking on reactions to training. Reaction measures are limited in gauging the value of training, but are valuable in this context where the primary intent was to measure the outcomes of feedback seeking behavior and not to evaluate the effectiveness of training. Assessing student reaction is "still considered appropriate for evaluating the effectiveness of training…by researchers and practitioners who have been pressed to determine the value of training activities" (Christoph, Schoenfeldt, & Tansky, 1998, p. 27). Feedback, in general, has been positively correlated with reactions to training, regardless of source. Further, information generated by the self, the task, or by via computer, have been perceived as more reliable, more trusted, and more useful than information generated by peers or supervisors (e.g.: Ang, Cummings, Straub, & Early, 1993).

Methodology

The population in this study consisted of participants and instructors of MD training programs in a U.K. Government Agency (Agency) of about 3,000 employees. The Agency had an HRD unit of 16 employees responsible for development and training services as well as internal consulting. MD constituted a key responsibility of the HRD unit because of the need to develop and retain managerial talent and to ensure a pool of qualified employees for internal promotion and succession. The focus of this study was a series of five -day training courses for employees who had been identified by their supervisors as potential future leaders. Courses were offered on average once per month and attended by 10 - 15 participants from various parts of the Agency. The courses followed a highly standardized curriculum and delivery process to ensure consistency of learning across courses and were delivered by teams of two instructors who belonged to the HRD unit. The curriculum focused on organizational issues, such as the overall strategic direction of the Agency and strategic planning and strategy implementation, and on organization behavior issues such as motivation, team building, communication, and learning styles. The courses were primarily instructor- and theory centered, but also included some role-plays, case studies, and action planning. Prior to a course, participants met with their supervisor and developed a performance contract that specified the particular performance issues on which to focus during the training. There was also in place a follow-up process designed to ensure the transfer of learning to the workplace.

The researcher observed several courses prior to the study and collaborated with HRD management and training personnel on its design. Survey data were collected from nine consecutively held courses over a seven-month period in 1998. . Five courses were taught in a residential mode and held at a seaside resort in the South of England. Four courses were taught in a non-residential mode where participants attended during working hours and then left for home. A total of 98 participants and 9 instructors completed the surveys, resulting in a response rate of over 95% for participants and 100% for instructors. MD participants were on average 34 years of age, had 11 years of professional experience, and were relatively new to their current position. Instructors, on average, were older and had lower levels of formal education but longer professional and job-related experience.

Results

Table 1 shows descriptive statistics, reliability indices, and zero-order correlations among the variables. All scales showed sufficient (Nunally, 1967) reliability. The mean scores for the four feedback sources suggested that the 98 participants in 9 MD courses did engage in feedback seeking to substantial degree (the scale anchors were 1: none, 5: lots) and that they sought feedback from a variety of sources. They did not, however, seek feedback from all sources equally. Instructors acted as the primary source of information on how well participants were meeting the learning goals of the course, followed by their peers and the course activities, and their own thoughts and feelings. This finding is in contrast to previous research where the self was the primary source of feedback.

Table 1
Course Participants' Descriptive Statistics and Zero-Order Correlations < .05 (N=98)

Variable	Mean (s.d.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Feedback Sources															
1.Instructors	3.60(1.05)	(.79)													
2 Peers	3.46 (.98)	.86	(.79)												
3 Course Activities	3.44 (1.07)	.76	.79	.78	(.83)										
4. Self	3.21 (.77)	.53	.61	.58	.55	(.68)									
Instructor Behavior															
5. Charismatic	4.21 (.48)	.45	.43	.38	.36	.41	(.74)								
6. Inspiring	4.44 (.50)					.31	.76	(.68)							
7. Stimulating	4.17 (.67)						.79	.75	(.72)						
8. Considerate	4.11 (.83)	.42	.34	.29			.72	.68	.75	(.76)					
Individual Variable															
9 Learning Orientation	2.89 (.61)				.24						(.70)				
9. Performance Orient.	2.09 (1.2)										(.69)				
10.Tolerance Ambig.	2.3 (.69)										-.38	(.72)			
Reaction Measures															
11. Intent to Transfer	2.14 (.55)					-.30				-.30			(.83)		
12. Motivation to Learn	2.15 (.59)	-.28	-.25	-.24		-.33					.20		.56	(.86)	
13. Reaction to Training	1.56 (.50)	-.47	-.46	-.30	-.32	-.37	.33			-.22			.57	.56	(.97)

Chronbach alpha values listed in (brackets)

Interestingly, however, the delivery mode of the course impacted the feedback sought from peers and course activities. While in both residential and non-residential courses the instructor ranked highest as a source of feedback and the Self lowest, residential course participants sought feedback from their peers and the course activities to a much higher degree than non-residential course participants. Table 2 also shows that, on average, course participants were learning oriented, that is they valued improving their abilities. They had a relatively low tolerance for ambiguity and equally low levels of intention to transfer the learning, motivation to learn, and a surprisingly low level of overall satisfaction with the training.

The four supraordinate variables were correlated highly (for feedback sources and instructor behavior) and moderately (for reaction measures and individual variables) correlated within each other. Among the variables, there were much fewer and lower correlations, with exception of moderate correlations between charismatic and, to a lesser degree, considerate instructor behaviors and feedback sources. This suggests that the more participants perceive their instructors as charismatic and considerate of their needs, the more they will seek feedback from all sources, and vice versa. An interesting finding was the negative correlations between reaction measures and feedback sources. The negative association between feedback seeking from the instructor and the other course participants and the positive reaction training, in particular, requires careful interpretation. It suggests that participants who seek more feedback from their instructors and peers tended to be less satisfied overall with the training and vice versa. The study did not address the issue of the quality of feedback participants were able to obtain. It is possible that students were looking for information that would help them make the course more relevant but never succeeded and were therefore dissatisfied with it. This question requires closer attention in a follow-up study.

The study also addressed specific aspects of feedback seeking: the amount of information sought from each source, the frequency with which they sought feedback, and its usefulness.

Instructors, too, expected feedback-seeking behavior by the course participants to occur, that they recognized different sources of feedback, and that their estimation of the relative importance of the sources varied. Instructors, like course participants, saw themselves as a more important source of feedback than peers, activities, or the participants' own thoughts and feelings. Instructors did, however, rated their own role as providers of feedback as higher than did participants ($p < .05$), and this difference was due to an overestimation of the frequency of feedback they provided ($p < .05$). They overestimated the frequency with which they provided feedback to MD course participants.

A series of stepwise multiple regression analyses was performed with feedback source (instructor, peers, activities, and self) and feedback characteristic (amount, frequency, and usefulness) as dependent variables.

In the regression analyses, reaction to training emerged as the most important predictor to feedback seeking from Instructors, Peers, and Activities, accounting 25%, 23%, and 11% of variance respectively. In all three cases, the regression weight was negative, suggesting that participants who are not satisfied with the training tended to seek more feedback from instructors, peers, and course activities than those who were satisfied. It should be noted that this was a post-hoc survey at a single point in time. Nevertheless, the fact that the survey was taken at the end of the 5-day training course suggests that participants had a chance to reflect back over the entire week to judge both their satisfaction and feedback-seeking behaviors. Feedback seeking emerged here as a compensatory mechanism that participants employed when the course did not meet their expectations rather than the valuable resource that the literature ascribed to the construct.

Charismatic behavior by the instructor added to participants seeking feedback from him or her.

When examining the overall frequency of feedback-seeking behaviors, professional experience emerged as a very strong predictor variable, accounting for 89% of the variance. The relationship is positive and almost perfect, suggesting that those with more professional experience also tended to seek feedback more frequently than those with less experience.

Performance orientation emerged as a strong predictor variable for motivation to learn and also for intention to transfer the learning to the workplace, accounting for 51% and 50% of variance respectively. In both cases, the beta weights are positive, indicating that the higher an individual's desire to demonstrate his or her abilities, the greater the motivation to learn and to transfer the learning after the end of the MD training course. These findings were surprising given the theoretical definition and previous research that had associated higher levels of performance orientation with a decrease in the willingness to learn because individuals are primarily focused on demonstrating their abilities rather than exploring new ways of performing.

Another surprise was the strong negative correlation between intellectual stimulation and reaction to the course. Where in previous research, leader behavior that challenges individuals assumptions and encourages them to think in new ways had been shown to contribute to satisfaction with that leader, this study showed the opposite effect. The more participants perceived the instructor to challenge beliefs and assumptions, the less satisfied they were overall with the course.

Conclusions

Feedback-seeking research is an emergent strand in the organizational behavior (OB) literature and extends traditional feedback research by proposing that employees actively pursue a number of strategies to obtain feedback about their performance. This study sought to extend this line of research into a key area of HRD, management development training. Studying feedback-seeking behavior in a series of MD courses, this study suggests a number of conclusions.

First, it appears legitimate to extend feedback-seeking research to MD settings. Feedback-seeking behavior tends to occur in MD settings, where, in contrast to the OB literature, not work performance, but learning is the goal. As in regular work settings, MD participants engage in feedback-seeking behavior, they seek substantial amounts of information about their performance, they do so frequently, and seek out a variety of sources. The instructor emerged as the primary source of feedback in terms of amount and frequency of feedback sought and its perceived usefulness. Residential courses appeared to encourage seeking feedback from peers and course activities, presumably because there more opportunities to interact than in a non-residential mode.

Second with regard to the accuracy of their own perception, MD instructors acted much like managers and supervisors in other studies, that is, they overestimated their own role in providing frequent feedback. Both roles bear similarities that might account for this: managers and instructors carry responsibility for the employee and participant performance outcomes and exert control to direct them toward these outcomes. Both groups also appear to underestimate the extent to which employees/participants self-regulate.

Third, in contrast to the OB literature, feedback seeking did not appear as a valued and positive resource. The negative association between feedback and overall satisfaction seems to suggest that those who sought more feedback were also less satisfied with the course. Feedback seeking here appears as a strategy that participants applied when the course did not meet their expectations.

Fourth, few of the hypothesized relationships based on OB literature were confirmed in this study. Charismatic behavior of the instructor was positively associated with feedback seeking, but accounted for only 10% of the variance. Professional experience emerged as a strong predictor of feedback seeking, perhaps suggesting that those with more experience were more focused on attaining specific goals and sought the information they needed to monitor their goal attainment.

Clearly, the study suggests a number of areas that need further investigation. While the self-regulation framework has been part of the social science theory base since the mid-1980s, HRD research has not yet made much use of it. The profession stands to gain from an examination of the role of self-regulation. The self-regulation framework constitutes a promising alternative to the control-oriented view of organizations and instruction. In situations where performance requirements are complex, where there are no clearly defined solutions to organizational problems, and where goals are ambiguous and preferences are shifting, external control of employee behavior is of limited effectiveness. In these situations, self-regulation is likely to be a valuable and powerful resource. Feedback seeking, as a part of the self-regulation framework can stand to receive increased attention from the HRD profession as an effective strategy in complex performance and learning situations.

This study is among the very few that investigated the role of feedback seeking in MD settings. Replications and extensions of this line of investigation are required to build a reliable knowledge base on this topic. Among the more imminent research needs are: replication of this study with other types of training and in different organizations; replication with training that is more student-centered and perhaps might provide more opportunity to seek feedback from sources other than the instructor; feedback seeking in applied problem-solving situations, such as experiential learning and action learning set with complex task without clear answers and solutions.

Finally, it is important to recognize the limitations of this study. Among them is the post-hoc design with its inherent difficulty in identifying relevant variables and attributing causal relationships. Second, there is the likelihood of single-method bias associated with using only one method of collecting information. Lastly, the sample was comparatively small and the results might reflect idiosyncrasies of the particular organization that do not generalize to other organizations.

Several implications for practice emerge from this study. First, the training of trainers should include the concepts of self-regulation and feedback seeking among course participants. Instructors who overestimate their own importance in providing feedback might fail to recognize the role of feedback from other sources. Second, participants of MD programs should be prepared to be alert to feedback from sources other than the instructor, especially their own thoughts and feelings. Upon completion of the training when participants are required to act in complex and novel situations, like leadership situations, the Self will oftentimes be the sole guidepost for assessing whether a particular course of action is appropriate or not.

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A Five Phase Framework for Designing a Successful Multirater Feedback System

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Given the increasing popularity and application of multirater feedback methodology for both developmental and decision-making purposes in organizations there is a need in the literature for more attention to the factors involved in creating a successful feedback process. The following paper describes a five-phase framework for designing such a MRF system based on the classic OD consulting skills model and many years of practitioner experience with large-scale feedback-based applications in Fortune 100 organizations.

Keywords: Multirater Feedback, Behavior Ratings, Consulting Framework

Multirater feedback methodology is one of the most rapidly advancing areas in HRD, OD and I/O practice and research today. The 1990s has been heralded by some as the age of information and thus it should come as no surprise that perceptions, opinions and ratings gathered from multiple sources at work such as managers, direct reports, peers, team members, colleagues, supervisors (straight and/or dotted-line), and clients or customers has emerged as one of the most popular and prevalent developmental and assessment tools in organizations (Bracken, 1994, 1996; Borman, 1997; Church, 1995; Church & Waclawski, 1998a; London, 1997; McLean, 1997; Tornow, 1993; Waldman, Atwater & Antonioni, 1998; Yammarino & Atwater, 1997).

Also known as multisource, 360-degree and full circle feedback, the uses of this type of information appear to be almost as endless as the number of different names or the number of sources from which data can be collected. A basic review of the literature, for example, yields feedback applications related to such areas as performance appraisal via upward or full 360-methods (e.g., Antonioni, 1996; Edwards & Ewen, 1996), individual and organizational development and change efforts (e.g., Burke, Richley & DeAngelis, 1985; Church, Javitch & Burke, 1995; Church & Waclawski., 1999; Church, Waclawski, & Burke, 2000; London & Beatty, 1993; Nowack, 1992), executive development and coaching methods (Dalton, 1996; Goodstone & Diamante, 1998; Hazucha, Hezlett & Schneider, 1993; Waclawski & Church, 1999), and even large-scale cultural assessments and trend analyses (e.g., Church, 1999a; London, 1997).

Despite, or perhaps even because of, the widespread adoption of this methodology in various settings and by all kinds of individuals (including managers and other types of consultants), many practitioners have begun to raise important questions about the design and implementation of these systems. While feedback applications are indeed abundant, given the reported failure rates of organizational change efforts in general and related management consulting fads such as TQM and reengineering efforts (e.g., Kotter, 1995; Schaffer & Thomson, 1992; Spector & Beer, 1994; Trahant & Burke, 1996), questions are now being raised about what works and what does not with respect to multirater feedback systems as well. Given the millions of dollars that are being invested in the design of such technology, often created specifically for a given organizational context, there is need to move beyond the hype associated with 360-degree feedback and focus instead on developing a successful system that will indeed promote behavior change and help improve individual and organizational performance. Moreover, meta-analytic research on the impact of feedback in general (Kluger & DeNisi, 1996) has shown that simply handing people some results in and of itself does not result in positive change, and can in fact cause decreased effectiveness over time.

What is critical, however, is the why, how, what and when involved in the process. That is to say, there is a combination of factors that contribute to the successful utilization of multirater feedback for positive individual and organizational change. Some of these elements include gaining support and commitment from senior leadership, creating meaningful linkages with corporate strategy and objectives, establishing feedback as an ongoing process not just a single event, the method of delivery (e.g., vis-à-vis coaching vs. the non-effective "desk-drop" used by some), and ensuring that action takes place as a result of the personal findings.

While a number of practitioners have suggested critical factors, guidelines, and potential external variables that might influence the success of a multirater effort (e.g., Antonioni, 1995; Church & Bracken, 1997; Church &

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Waclawski, 1998a; McLean, 1997; Waldman et al., 1998; Wimer & Nowack, 1998), what is still needed in the literature at this point is clear, concise, practitioner framework for internal and external HRD, OD and I/O professionals involved in designing a developmental feedback system. Only by making a concerted effort to attend to the design process itself can we move toward a better understanding of why some multirater feedback efforts fail and some are highly successful. Such a practitioner framework would need to delineate the important factors in each aspect of the process from initial development, through feedback delivery, to evaluation. Although models of this type exist for other types of assessment methodologies such as organizational opinion surveys (e.g., Church & Waclawski, 1998b; Nadler, 1977), there is a need for a similar comprehensive approach to feedback applications.

The purpose of the following paper, then, is to introduce such an applied framework that will be helpful to both practitioners and researchers alike based on a combination of prior theory, research, and consulting practice regarding the intersection of the areas of organization change and development and multirater feedback. Following a brief overview of the core assumptions of multirater feedback methodologies inherent in this type of approach, a five-phase practitioner framework will be described in detail. Although the model is based on a combination of existing literature and 15 years of combined consulting experience with such systems, and therefore is directly relevant to HRD and OD practice, areas for research and further development will also be highlighted. Finally, limitations of the model will also be discussed.

Core Assumptions of MRF

In general, the process of collecting and utilizing data from multiple sources for individual development, performance improvement, and organizational change is based on several key assumptions. One set of these assumptions reflects the more methodological aspects of the assessment process, and the second concerns the psychological and cognitive processes involved. Each of these is described briefly below.

First, there is the assumption of *behavioral consistency*. Based on measurement theory (Landy & Farr, 1980; McLean, 1997) the premise is relatively simple. In order to provide an individual leader, manager or executive with feedback, the behavior of that individual must be observable and subsequently quantifiable using some form of scale or index. Fundamentally, then, there is an inherent belief here that individuals do in fact behave in certain, consistent, and observable ways with co-workers, clients and/or other organizational members, thus making ratings possible. Hence, multiple ratings from the same (within) observer source will ultimately increase the validity and reliability of the information obtained. At the same time, however, it is also assumed that individual behavior differs enough based on the nature of the situation, role sets and other individuals involved in the process so that multiple ratings from different perspectives are indeed worth collecting. From this perspective, ratings from different (between) sources such as those of direct reports, peers or customers will result in a greater range of opportunities for observation and subsequently behaviors being assessed for comparison purposes (Harris & Schaubroeck, 1988; Landy & Farr, 1980). These two elements of behavioral consistency, of course, lead to the other primary methodological assumption of *observer consistency*. In short, observer consistency means that observers (or co-workers, raters, etc.) have the appropriate skill, ability, and data collection methodology to accurately assess, index and record the behavior of the focal individual. Clearly, without these two assessment related assumptions, the process of collecting behavior data is relatively pointless. Despite this, many MRF systems are developed with little to no attention to who the appropriate raters might be or whether or not they are in a position to accurately assess the behaviors of the focal individual.

The second major set of assumptions in MRF concerns the psychological and cognitive processes involved. First, there is a need for *positive rater motivation*. On the part of the observers, this is reflected in a relatively straightforward assumption—i.e., that raters are appropriately motivated to provide accurate ratings. Similarly, the motivation of the focal individual involved is also assumed to be positive in nature—i.e., he or she is interested in receiving accurate feedback with the intent to use it for personal development and/or performance improvement. In practice, of course, motivation is always an issue, particularly when MSF is mandated by senior management without appropriate forethought and linkages to existing organizational systems and initiatives (Harris, 1994). A second major cognitive psychological assumption in MSF is the notion that *feedback enhances self-awareness*. Based on a combination of clinical and social psychological theories (e.g., Argyris, 1970; Bion, 1959; Lewin, 1958), the conceptual chain of events begins with an individual assessing his or her own behavior (thus the need for a self-rating, which not all applications of MSF employ) prior to receiving feedback. This sets the cognitive stage via self-perceptions that, when compared with some collective of others' observations, initially results in cognitive dissonance (Festinger, 1957) and ultimately greater clarity regarding (a) how others' experience this individual's behavioral strengths and weaknesses in the workplace, (b) how these compare with this individual's own perceptions on the same managerial or leadership facets, and typically (c) how both sets of data compare with some larger comparison group or norm such as those collected from other workgroups, departments, functions, or even other organizations. Following initial resistance and rejection, the assumption here is that this process of greater clarity can, in turn, given the appropriate environment and tools, result in energy and impetus for change (Lewin,1958; London, 1997) as well as the potential for enhanced feedback seeking activity (Ashford & Tsui,1991) in the future. This process has been described in detail elsewhere (Church & Waclawski, 1999).

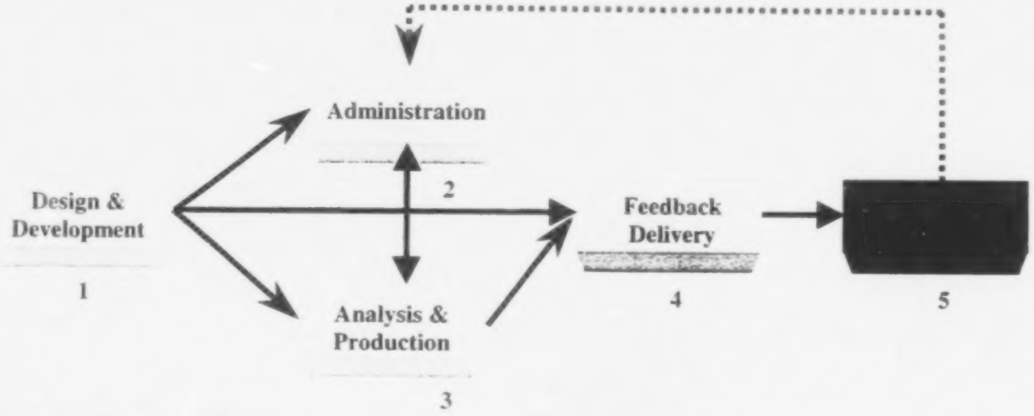
Clearly, the above assumptions require that a number of conditions and skills exist for an effective MRF initiative to work as intended. Next, we will describe a five phase framework for designing MRF systems that addresses these factors.

Five Phase Framework of Multirater Feedback

The five phase framework of multirater feedback is adapted in part from the classic OD model of organizational consulting (Kolb & Frohman, 1970). Based on the action research perspective that highlights the importance of data in any change process (Lewin, 1946; 1958), it consists of seven clear phases; phases, not steps, since there is overlap throughout the process. The seven phases in the classic consulting model are, *entry, contracting, data collection, data analysis, data feedback, intervention, and evaluation*. These phases represent the complete process from beginning to end in any given consulting relationship (e.g. OD, I/O, HRD or whatever).

The five phase framework for MRF is similar to the OD model in that (a) it is also phased-based so there is an open flow throughout the process, and (b) it follows a natural progression from the initial ground work through the data collection and delivery and requires follow-up. Although relatively intuitive and straightforward in appearance (see Figure 1), the issues inherent in each phase are important and often overlooked when practitioners and others design MRF systems. Each of the five phases is described briefly below along with some of the key issues and challenges involved.

Figure 1. Five Phases of MRF Implementation



Design and Development

The first step in any significant organizational undertaking is to ensure that you have a firm understanding of the context involved. The design and development of a new feedback process (whether the tools and methods are in fact to be developed from the ground-up or adapted from some existing source) is no exception. Thus, before the internal or external feedback practitioner can begin to design and develop the actual assessment instrument, it is essential that two critical concerns be addressed: (1) He or she must understand the organizational environment (i.e., the systemic and cultural contents) in which the MRF system is being created and delivered, and (2) he or she must have a firm grasp of the client organization's needs vis-à-vis the development and use of the feedback system. These two factors more than any other determine the *relevance* and ultimate *impact* of the feedback, as no MRF system is created or used in a vacuum. Understanding the key components of the organization (including the mission, strategy, culture, and existing systems), as well as the specific needs of the client are essential to developing a meaningful and successful MRF system.

Prior experience here is one importance factor. For example, if employees have had little exposure to receiving any kind of formal individual feedback, such as might be the case in a professional services firm (Church et al., 1995), the nature of the communications and leadership efforts needed to model and support the feedback process will be different than in an organization that is very familiar with such methods. Establishing linkages to existing initiatives and performance objectives is also critical. For example, a feedback system that is directly linked to the organization's strategic objectives and has been designed at the request of the client to help move the organization and its leaders forward in the accomplishment of these objectives is likely to be significantly more impactful than a feedback system derived from some standard set of general management practices.

Also important in this phase, of course, are the fundamental principles and critical issues involved in creating a MRF instrument, such as obtaining "buy-in" and support from key organizational members, creating a MRF system plan, identifying and understanding the target audience for feedback, item writing and scale construction, readability issues, and the importance of considering the type of action planning efforts to be utilized when initially constructing the instrument. The latter skills, though often overlooked by many leaders, managers and even some HR professionals with little methodological experience, can nonetheless have a significant impact on the utility and therefore the ultimate success of the results obtained. This is one of the reasons that successful MSF efforts typically require good, solid experience in item writing and scale design as well as attention to the larger more systemic factors.

Administration

This second phase consists of all the logistical and tactical elements required to collect the MRF data. Important concerns for the practitioner include how to effectively communicate the purpose and objectives of the MRF system to those involved (i.e., raters, ratees, and those in a position to reinforce the process), options for administration and data collection (e.g., on line, paper and pencil, email, voice response unit, etc.), how to coordinate with the client organization to ensure a smooth and seamless administration of the feedback instrument, proven techniques for following up with participants and respondents to ensure the highest possible response rates, best practices regarding the timing of the administration and its impact on response rates, the importance of reinforcing and protecting confidentiality during the entire feedback process, and suggestions for working with clients who have not had previous experience in administering MRF systems, which, despite the popularity of MRF, still represents the majority of organizational settings.

In many ways this phase also contributes significantly to the success or failure of the MRF effort. For example, if the participant identification codes are not correct for each focal manager and his or her respondents, the integrity and validity of the MRF results obtained will be void. Without a well thought out and implemented plan for administering the MRF paperwork (or tracking online responses) the entire MRF process will be invalidated before it even begins. Moreover, making sure that participants are kept informed about the response rates of their constituents is also essential to the process. Specifically, good response rates are necessary to ensure the most complete and therefore accurate ratings possible. Without sufficient responses from key constituents (for example, supervisors are often slower than other groups to respond), the perceived quality and usefulness of the feedback is at risk. Although some research (Church, Rogelberg & Waclawski, 1998) has suggested that there may only be a very minor negative relationship between prior performance and response rates in MRF efforts, these are importance concerns nonetheless from the participant and coaching perspectives.

Finally, the importance of confidentiality in the MRF process can not be overstated. Participants' and especially their respondents' belief in the anonymity of their responses is the cornerstone of a good MRF system. From the participant or focal manager perspective, the confidentiality of the final results themselves is critical (i.e., no one else within the participant's organization will have access to his or her results without his or her authorization). From the respondent perspective, a firm belief that their individual ratings will in no way be identified or revealed to the focal manager receiving feedback is paramount to ensure open, candid and sometimes less than favorable ratings of the focal manager's behavior. These are issues that must be managed continually throughout the administration process and well into the later stages as well.

Analysis and Production

This phase is focused on the actual generation or creation of the feedback report itself. There are many issues for the HRD, OD and I/O practitioner to consider and address here, the most important of which are those related to the look and feel of the report. These elements are critical as they directly impact the client's (or feedback recipient's) reactions to and understanding of the MRF data. For example, in our experience feedback reports that contain both numeric and graphic data displays are far superior to those that contain either one or the other. We have found this to be the case because people have different orientations to reading, interpreting and working with data. Quite simply some prefer numbers ands others prefer charts. By providing both types of displays for the participant, maximal usefulness is guaranteed. The same argument can be made for providing various types of text interpretation (and/or the additional use of write-in comments either in "cleaned" verbatim or content coded form) in addition to more traditional use of mean score results in various formats.

Another critical element in report analysis and production is the nature of the information being presented. In general we advise the use of average rating scores for each perspective (to ensure confidentiality) in conjunction with some kind of indication of the range of responses (to provide specificity). Typically, the range is better reflected via a form of highest and lowest indicator rather than as a full distribution of individual scores which tends to allow participant's to speculate too much regarding "who provided that particularly low rating." The key is to provide the participant with the most useful (in other words specific) data you can without jeopardizing the confidentiality of the process. Often this is a delicate balance.

Finally, the "user friendliness" of the feedback report itself cannot be overlooked. Specifically, it is essential that no matter what type of data is being displayed in whatever form it must be intelligible to the participant or focal manager. At the most basic level, this means clearly labeling each item number, presenting the questions as they were asked, and linking these to graphic or visual data clearly on each participant's report., Moreover each should display the number of respondents who participated in the feedback process (by each constituency group—e.g., direct reports, peers, clients, supervisors, etc.), group normative data (for the larger function, unit, region or even organization as a whole), and of course the name of the focal manager being rated (we strongly suggest this be included on every single page). Attention to details such as these is critical in ensuring increased readability and therefore increased usefulness of the MRF report.

In short, no matter how well constructed and administered the MRF instrument, if the final report is not accurate, clear and easy to read and work with, the MRF initiative will fail to be a successful one. Some additional critical factors that will also be discussed include the importance of assessing the client's sophistication and experience in working with data and feedback reports prior to delivery, the speed and quantity of production methods and systems (i.e., how many people will need reports and in what time frame), and selecting the best and most user friendly formats for data presentation.

Feedback Delivery

This phase consists of the actual delivery or distribution of the MRF report to feedback recipients throughout the organization. There are a variety of modes of delivery available to the feedback practitioner that vary on several key dimensions: (1) the cost of delivery, (2) the desired level of integration with other organizational initiatives, and (3) the degree of assistance and support to be provided to the focal individual (feedback recipient) to help him or her understand, synthesize, and ultimately take action from the results. Each of the possible modes of delivery—e.g., from a multi-day residential coaching based program with biannual follow-up coaching efforts to the infamously ineffectual "desk-drop"--and their associated advantages and disadvantages will be discussed.

Until very recently executive development has been almost exclusively conducted as a group process. Historically, executives and managers have been developed through training sessions resembling classroom learning. With the enormous growth (over the past decade) in the use of individual assessment in the workplace, the use of multirater feedback as part of a company's formal executive development process has become quite commonplace. Nevertheless, even though the delivery of this type of feedback is usually done within the context of a group training session (such as multi-day residential development program), the focus of the feedback is invariably on the perceptions of the *individual* executive--specifically, how he or she is seen by direct reports, peers, supervisors, and even clients and/or customers. So while the feedback is delivered in a group setting, the focus is typically on the individual. In fact, in the present five phase model of MRF, coaching is integral to the process of learning and ultimately changing.

However, despite the popularity of such large group oriented developmental programs, many managers simply do not have the time they once had to invest in attending training programs that last several days. Thus, in some situations, individual coaching with MRF as the primary input is often used independently in lieu of large group training and development efforts. Although this approach can provide added benefits in terms of greater individualized attention to the focal manager, downsides can include missing out on group learning and networking experiences, missed opportunities to share thoughts, feelings and insights based on feedback, the absence of group support, and discussions about the impact of the organization's culture on giving and receiving feedback. Of course, individual coaching done outside the context of a large group training session can also be much more costly to an organization as economies of scale are almost nonexistent given the associated travel costs coupled with many consultants' high daily rates.

The final mode of delivery, known as the "desk drop", simply consists of providing each focal manager with a copy of his or her feedback report sans coaching or any other helpful interpersonal input. Although this method is the least costly, it is also in our experience the least effective. Participants are left to their own devices to decipher and make behavioral changes based on their personalized feedback. No explanation, assistance or guidance is provided in this type of delivery. Needless to say, we do not recommend this approach as we feel it is potentially more harmful than providing no feedback at all, and more than likely represents a waste of resources .

Follow-Up

While this seemingly "final" phase is critical as it marks the completion of the MRF cycle, unfortunately, as with most change efforts, it often receives far too little attention from practitioners and their client organizations. This is disconcerting as following up to assess the impact of any MRF initiative (or any organizational improvement effort in general) is critical not only to the perceived credibility of the current MRF initiative, but also to the viability of future ones as well as the ultimate integrity of the HRD, OD or I/O function associated with it. Quite simply demonstrating impact by measuring progress and examining the link between MRF and other measures of individual and organizational performance (Church, 1995b; Waclawski, 1996) is vital to establishing the importance and credibility of the MRF or any related assessment process. To this end, techniques for assessing impact, methods for linking MRF data to other measures of performance, and the importance of creating long-term performance systems and strategies that include the use of MRF are discussed below.

As a rule, the criteria one uses to assess the success of any MRF process should be determined well in advance of the follow-up phase. In fact, these criteria should be determined before the MRF process even starts. More specifically, the MRF process should be driven by some quantifiable set of deliverables and/or outcomes such as better leadership, increased productivity, enhanced communication, or improved team climate and effectiveness etc. If these objectives are not determined in advance of the instrument construction and then built into the feedback effort itself, they cannot be achieved let alone evaluated as part of the follow-up process. Therefore, careful though and consideration must be given to the purpose and end products of any MRF effort well in advance of its administration.

In addition to clearly identifying and operationalizing outcome criteria at the beginning of the MRF process, systems which actually *support* and *reinforce* individual behavior change must also be put into place. Coaching, as we have already discussed, is one example of such a support mechanism that reinforces individual change, especially when it is offered as an on-going process as opposed to a single coaching session. Internal organizational resources such as additional training and on the job skill development also serve to increase the likelihood of lasting changes based on MRF results. Unfortunately, all too often this critical factor is overlooked or rejected at some point during the MRF planning and budgeting process. Thus, in the end in many situations, the expense of creating such organizational support systems is often the determining factor in the decision not to implement them. In our experience, MRF efforts that are conducted without institutionalized systems to support change are likely to be more costly in the long run than those with only adequate support, as they going to be are far less effective.

Finally, there are two ways to link MRF to predetermined performance criteria. The first is to embed MRF practices or behaviors in other existing appraisal and/or measurement processes (i.e., the performance appraisal system, employee and/or external customer satisfaction surveys, etc.). More specifically, this means taking key items from the MRF questionnaire and making them a part of other important and well utilized organizational measurement and assessment tools. By making these formal connections and linkages, the focal manager will not only receive feedback on the key practices in a developmental context (through the MRF process), but he or she will also receive pay and promotion increases (or decreases) as a result of his or her performance on these same key indicators.

The second approach to linkage is through correlational and/or regression analysis (e.g., Church, 1999b; Waclawski, 1996). This involves linking MRF feedback at the individual, group, and organizational levels to other indices (typically hard measures) of performance such as ratings of turnover, absenteeism, departmental productivity, sales, ROI, customer satisfaction, repeat business, etc. This approach capitalizes on linking existing databases of critical organizational performance measures to an MRF (or survey) instrument and is simpler in some ways to conduct as it does not require embedding MRF practices into preexisting measurement tools. Unfortunately, such an approach does represent its own constraints as well, including an inability to determine true causal relationships. In general, however, both approaches are useful in reinforcing the importance of behavioral change by demonstrating both to organizational members and its leadership that job performance is contingent not only on measures of bottom line productivity but also on behavior; specifically, how each focal manager behaves as a leader and or manager. Without creating a "hard" link between behavioral change and job performance ratings, the importance of the MRF process to job performance cannot easily or credibly be established.

Limitations and Areas for Future Research

No framework or model is perfect and the present approach to MRF is no exception. While our model may seem overly simplistic and perhaps lacking in sufficient detail, it does provide the would-be MRF practitioner and even the MRF client with a good place to start. With respect to future research, our aim is to further develop and study this model and its applications across a variety of settings and contexts. In particular, we believe that establishing the link between MRF and organizational performance will be of critical importance in the coming decade. We also believe that this link will be critical not only to MRF researchers but will in large part determine the longevity (and continued viability) of the MRF methodology itself, as it will for many different types of OD and HRD related efforts. In short, if we as a field do not successfully demonstrate the linkages between the work we do and the continued improvement of individuals and organizations, the perceived utility of our efforts in organizations will indeed wane. To a large extent this has begun to happen already with respect to other similar forms of behavioral and attitudinal assessment such as organization surveys. MRF is simply the next arena.

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An Evaluation of the Quality of 360-degree Assessment Instruments

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Recently 360-degree assessment has become popular. It can be used as well for evaluating employee performance as for the evaluation of training transfer. The instruments used for this kind of assessment, where managers are evaluated by co-workers such as their supervisor, peers, subordinates and clients, should meet certain standards (e.g. psychometric and personnel evaluation standards). A checklist of standards will be presented on the basis of which 360-degree instruments are examined. In this study four 360-degree assessment instruments are examined. The outcomes of the study give insight into the qualities of a number of 360-degree instruments.

Keywords: 360-Degree Assessment, Multirater Assessment, Training Evaluation

Introduction and Problem Statement

In a multirater assessment, job-performance of an employee is evaluated by one or more co-workers, such as supervisors, subordinates, peers, customers, and suppliers. If all of these sources are being used, and the employee also evaluates his or her own job performance, this is called a 360-degree (full circle) assessment. The assumption is that with each additional rater source, the confidence that the reported results are an accurate reflection of what is happening is increased (Robinson and Robinson, 1989).

360-degree assessment can be used for several purposes. First, it can be used as an instrument for personnel development, for example for analyzing the strengths and weaknesses of an employee. It can also, as an element of a training or development program, provide a trainee with a clear picture of his or her performance and training priorities. Furthermore, 360-degree assessments can be instruments in formal performance appraisal, for example as a basis for making salary or promotion decisions. Finally, 360-degree assessments could be used in training evaluation. In that case, the trainee's co-workers provide feedback, both before and after the training, and/or are asked directly for perceived changes in their colleague's job-performance, as a result of the training he or she has undergone.

The 360-degree assessment usually concerns a questionnaire, by means of which raters give their opinion about the ratee's job-performance. This questionnaire generally consists of several competencies that are considered relevant for the ratee's job-performance. For example, an instrument may focus on five groups of competencies, i.e. leadership, communication, management, decision making, and personal behavior. Each of these groups is measured by more specific behavioral characteristics. For instance, 'communication' may be measured by 'listening skills', 'written communication', 'oral communication' and 'presentation skills'. Each category is usually measured by means of several items.

Ten years ago, only twenty to thirty instruments were on the US market, now over one hundred are available (Lepsinger and Lucia, 1997). The quality of these instruments should be ascertained since it will not matter what the data collection process reveals about an individual, if the instrument lacks validity, reliability and applicability for the organization (Church, 1999). Some instrument evaluation has already been carried out (Morical, 1999; Van Velsor and Leslie, 1991). Several studies have focused on their reliability, (Nijhof and Jager, 1995) and validity (Church, 1999), and on the effects of 360-degree instruments for evaluating management development (Rosti and Shipper, 1998; McLean et al., 1995; Hazucha et al., 1993). However, most of these studies focus on US-instruments.

The increasing use of 360-degree assessments in Dutch organizations has resulted in the development of a considerable number of Dutch instruments. This popularity, however, has not been supported by research on their quality. This study is therefore meant to reveal more about the extent to which Dutch instruments meet the standards included in the checklist.

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Theoretical framework

A 360-degree assessment focuses on personnel evaluation. The Joint Committee on Standards for Educational Evaluation has developed standards for personnel evaluation (1988). These standards focus as well on the quality of the evaluation instruments used as on the process of evaluation, and fall into four categories: propriety, utility, feasibility, and accuracy.

The *propriety standards* reflect the fact that personnel evaluations may fail to address, or violate certain ethical and legal principles. They include recommendations that are meant to promote the accessibility of evaluation reports and guidelines for interactions with the person being evaluated. These standards appear to be very important for 360-degree assessment, especially for the assessment process. Ratees as well as raters should be approached with care, since giving and receiving feedback can be threatening. Issues like the purpose of the assessment, or confidentiality should be communicated clearly.

Utility standards are intended to guide evaluations, so that they will be informative, timely, and influential. The evaluation is only informative is the right questions are being asked. Therefore, ratings should focus on competencies that are relevant to the job and should be based on function or task analysis. Items and response wording should also be clear and easy to be understood. Preferably, there is room for recommendations to give raters the opportunity to explain themselves and to provide more useful information. Other important standards for 360-degree assessment are functional reporting and follow-up. Yukl and Lepsinger (1995) developed some guidelines for the display of feedback in the final report. In general, the report should clearly identify feedback from different perspectives, compare feedback from others with the manager's own perceptions, compare the manager's ratings with norms, display feedback for items as well as scales (mean score, range, and distribution), and should provide feedback on recommendations. Follow-up appears to be a crucial factor in a 360-degree assessment (Hazucha et al., 1993). The trainee should be helped to understand the results and pursue appropriate actions.

The *feasibility standards* promote evaluations that are efficient, easy to use, viable in the face of social, political, and governmental forces and constraints, and that will be adequately funded. These standards may be problematic in relation to 360-degree assessment, since this kind of assessment may not be very practical and/or easy to use.

Accuracy standards aim at determining whether an evaluation has produced sound information. Though the other categories mainly focus on the assessment process, the accuracy standards refer especially to the 360-degree instrument. The instrument should be valid, reliable and control bias. Van Velsor et al. (1997) indicate minimal levels of internal consistency, interrater reliability, and test-retest reliability (see checklist).

When studying 360-degree assessment, the performance appraisal literature can also provide valuable input. Performance appraisal concerns the process of identifying, observing, measuring, and developing human performance within organizations (Cardy and Dobbins, 1994). The purpose, in general, is to improve employees' performance and to provide information that can be used in making work-related decisions. Cascio has done important work regarding performance appraisal. According to Cascio (1995) appraisal systems have to meet five key requirements: they should be acceptable, practical, relevant, sensitive and reliable. In the view of Cascio, validity can not be measured directly, since it is unknown what 'truth' is in performance appraisal. By making appraisal systems relevant, sensitive, and reliable, it can be assumed that the resulting judgments are valid as well. One of the main implications of performance appraisal theory for 360-degree assessment is the importance of using behaviorally focused items in questionnaires (Murphy and Cleveland, 1995). Questionnaires should always be formulated in terms that are easy to interpret by raters. If the assessment is used to measure training transfer, only characteristics that can be controlled and developed by the trainees should be used. To warrant reliability and bias control, raters should be trained to use the instrument properly.

Many authors in the field of 360-degree assessment have established guidelines or recommendations to guarantee proper use (Dalessio, 1998; Tornow and London, 1998; Van Velsor et al., 1997).

On the basis of the aforementioned references, a checklist has been developed for judging the quality of 360-degree instruments (Table 1).

Method

Four instruments for 360-degree assessment have been scored on each element of the checklist. It was attempted to examine all 360-degree instruments developed and sold by Dutch organizations. It is difficult to say how many Dutch instruments are available, but we expect that there are considerably more instruments than the ones that have been examined here. However, it is supposed that the examined instruments give a good picture of what is available on the Dutch market. The organizations approached to participate in the study delivered a sample of their instrument, a sample of the 360-degree feedback report that ratees receive after the assessment, and all other required information. Additionally, vendors of the instruments were interviewed.

The scoring is based on document analysis (the questionnaires and feedback samples), and on the information provided by the vendor. For some instruments, studies on their reliability and validity are available that provide interesting additional information. If relevant, the results of these studies are presented here.

Table 1
A standards checklist for examining 360-degree instruments

Competencies	Ratings are made on competencies relevant to the job Competencies are based on function or task analysis
Items	Every competency is measured by several items Items focus on behavior that can be observed easily The item wording is clear Only factors over which the ratee has control are included Item wording and qualification are free of irrelevant characteristics, such as race, age, sex, religion
Adaptation	The questionnaire can be adapted to a specific situation
Response	Response scales are clear There is room for recommendations There is a non-response option ('don't know', 'not applicable')
Feedback report	Language and graphics are understandable Feedback is displayed from different perspectives Self-scores are compared to scores of other rater groups Feedback is reported for items as well as competencies The mean score of each item and competency is displayed The range of each item and competency is displayed Scores are compared to norms
Development	The instrument is based on a combination of theory, research and experience
Reliability	All scales have internal consistency coefficients (alpha) of at least .6 Interrater (within-group) reliability is at least .4 All scales have test-retest coefficients greater than .4
Validity	Research should be done to establish validity

Results

In this section the features of the examined instruments are described and their scores with respect to the judgment on the basis of the checklist are presented.

Instrument 1 is a 360-degree instrument which has been available since 1993. It is being used in many Dutch organizations as well as in Japan, Belgium and Great Britain. It is mainly used for management development, though recently a pilot started in which it is used for measuring behavioral change as a result of training. To use this instrument, certification is required and a coaching and follow-up process should be developed. Van der Woude (1995) examined the reliability and validity of this instrument, while Van der Giessen (1997) used it to examine the influence of 360-degree feedback over time on 12 selected behavioral characteristics. The results of these studies can be found in Table 2.

Instrument 2 was developed in 1997 in co-operation with a Dutch university (Rietveld, 1997). The instrument is being used in the Netherlands only. It focuses mostly on high-level managers and is used for developmental, appraisal and communication purposes. The use of the instrument as a training tool is still in the experimental stage. Rietveld (1997) has done some research, concerning the internal consistency and interrater agreement (supervisor versus others and self versus others) of the instrument. Boers (1999) formulated some new competencies and examined their internal consistency. The results of these studies are included in Table 2.

Instrument 3 was developed in 1997 and is being used in many Dutch organizations. Although its main purpose is the development of (higher level) managers and management teams, the instrument is also used in a training context, either before training (to assess the strengths and weaknesses of trainees), or after training, (to assess further development areas). The intention is to use the instrument for measuring training effects. No research has yet been done on the reliability or validity of this instrument.

Instrument 4 was developed in 1997 and has been used in many Dutch organizations. Free discussion of feedback results is considered the main advantage of 360-degree assessment. The instrument is mainly used prior to training, to assess training needs. Although the instrument now is only sold in combination with training, the intention is to sell it in other contexts than the training context. Groeneveld (1997) examined the internal consistency of the competencies in the instrument. The results can be found in Table 2.

Table 2

The results of the comparison of four 360-degree instruments with the checklist

	Instrument 1	Instrument 2
Competen-cies	The user (organization/ratee) selects the relevant competencies Competencies are not based on function or task analysis	Ratee and supervisor select relevant competencies Competencies are based on experience with performance appraisal and function analysis
Items	All dimensions contain about 5 items Items are opposite statements about behavior Items focus on easy to be observed behavior Many items measure more than one skill/behavior Items focus on skills that can be developed Item wording does not explicitly contain bias characteristics	All dimensions are measured by 4-8 items Items do not focus on easy to observe behavior Items contain words as: often, sometimes, usually Statements are alternately positively, or negatively formulated Items focus on skills that can be developed Item wording does not explicitly contain bias characteristics
Adaptation	The instrument can not be adapted to a specific situation	The instrument can not be adapted to a specific situation
Response	1-5 scale, position between opposite statements No non-response option No room for recommendations	Response scales are clear 5-point agreement scales Non-response options No room for recommendations
Feedback report	Scores/graphics are explained and understandable Feedback is displayed from different perspectives Self-scores are compared to other-scores Feedback is reported for competencies and items The mean and range of each item and competency is displayed Scores are compared to norms The report includes a strength-weaknesses display (highest/lowest average scores) There are development directions	Graphics are explained and understandable Scores are percentages Feedback is displayed from different perspectives Self-scores are compared to other-scores Feedback is reported for competencies and items Item display is complex because of positively and negatively formulated items There is no mean score or range, since scores are presented as percentages Scores are not compared to norms There are some follow-up directions
Development	Developed on the basis of experience and research	Experience and some research
Reliability	Almost all alpha's are > 0.6 Interrater reliability is low Test-retest is moderate to low	Most alpha's are > .6 Interrater reliability is low Test-retest reliability has not been studied
Validity	Construct validity was studied and considered satisfactory	Validity has not been studied
	Additional information	
Experience	six years of experience; been used in many Dutch organizations and in other countries	used for two years in many Dutch organizations
Purpose	Development	Development, communication, appraisal

(Table 2 continued)

	Instrument 3	Instrument 4
Competen-cies	127 items of which 96 focus on management skills and 31 on personality traits It is a standard instrument (no selection)	39 competencies Ratee and supervisor select relevant competencies Competencies are based on literature research, interviews and expert knowledge
Items	Items do not always focus on easy to observe	Every competency is measured by 5 items

	behavior (personality traits) Not all items can be developed or controlled by the ratee Item wording is clear Item wording does not explicitly contain bias characteristics	Many items do not focus on behavior that is easy to observe, but on personality traits Not all items are easy to be developed by the ratee Item wording is clear Item wording does not explicitly contain bias characteristics
Adaptation	The only adaptation is that items can be left out.	The instrument can not be adapted to a specific situation
Response	Response scales are clear 9-point frequency scale Respondent indicate what the desired score is Non-response option No room for recommendations	Response scales are clear 6-point applicability scale Non-response option Room for recommendations
Report	Feedback is extensively explained Feedback display is complex Feedback is displayed from different perspectives Self-scores are compared to other-scores Mean and range is reported for items and for dimensions Scores are not compared to norms	No display from different perspectives (other-ratings are combined in one group) Self scores are compared to aggregated other scores In the paper-and-pencil version, feedback is only reported for competencies, the electronic version will report on both competencies and items Mean and range for each competency is displayed (in the electronic version also for items) Scores are not compared to norms
Background	Developed on basis of theory	Theory and expert opinions
Reliability	Internal consistency has not been studied Interrater reliability has not been studied Test-retest reliability has not been studied	Internal consistency is low Interrater reliability has not been studied (check) Test-retest reliability has not been studied
Validity	Validity has not been studied	Validity has not been studied
	Additional information	
Experience	2 years, used in many organizations	2 years, used in many organizations
Purpose	Development	Input for training

Discussion

In this section each element of the standards checklist is discussed and similarities and differences between the four instruments are described. On the basis of the results presented, organizations and researchers can select the instrument that best meets their needs. For example, an organization that wants to use 360-degree assessment to stimulate communication about managers' job-performance will look for another instrument than a researcher that wants to measure training effects.

Competencies and items

- All instruments except one allow competency selection. Competency selection is necessary when the instrument is being used for training evaluation since only relevant competencies, i.e. those competencies that are developed in a specific training, should be included;
- Every competency usually is covered by several items;
- Though according to the literature it is important that items focus on easily observed behavior, most of the examined instruments contain one or more items that are not formulated into that direction. If items do not focus on observable behavior, raters need to interpret their meaning which probably will result in decreasing reliability. If the instrument is especially meant to be used for development purposes, this may not be a big problem. In contrast, if ratings are being used for training evaluation, reliability is of great importance;
- Some instruments focus on behavior that can be developed by the ratee (instrument 1 and 2) while others contain behavior that can not directly be influenced by the ratee. For example, personality traits are difficult to change and thus not easy to be developed by ratees. Likewise, items formulated as results may be strongly dependent on other factors than the ratee's performance;
- Whether the examined instruments do not cause bias is difficult to say on the basis of the available information. However, none of them does explicitly contain bias characteristics;

- Most instruments are characterized by clear item wording, though some of them contain items that focus on more than one thing at the time, e.g. 'this person communicates about important decisions *and* asks for input'. These kinds of items can not be answered on one response scale and therefore should be reformulated.

Adaptations

- When the instrument is being used for training evaluation, it should be possible to select the competencies and items on which a specific training focuses. Most instruments do not allow further adaptation than selecting relevant competencies (instruments 1,2,4) or leaving out items (instrument 3). However, in most cases the database of competencies and items is large enough to enable the selection of relevant items.

Response scale

- Two instruments consist of 5-point response scales, one has a 6-point scale, and one a 9-point-scale. If the aim is to measure changes as a result of training this may ask for a, more specific, 9-point scale. However, 5-point scales also seem to provide enough opportunity to measure changes. In addition, most people are familiar with giving ratings on a 5-point scale. A 6-point scale could have the advantage that 'neutral' ratings are not possible since it does not have a central position, such as 5- and 9-point scales. It is difficult to say which response scale is the best option;
- Response scales are formulated as agreement, (for example: 'I agree/I do not agree with this statement'), frequency ('my supervisor often/never exhibits this behavior'), or applicability ('this statement is applicable/not applicable'). Instrument 1 is the only one that has a non-numbered scale where raters must choose between opposite statements;
- All instruments but one (1) have a non-response option;
- Only one instrument (4) contains room for recommendations;
- There is only one instrument (3) where raters also indicate the desired score on each item.

Feedback report

- All instruments, except the fourth instrument, display feedback from different perspectives. Instrument 4 only displays self-scores and aggregated other-scores. For developmental purposes, the feedback should be displayed from different perspectives so that ratees receive relevant information. If the purpose of the instrument usage is training evaluation, as in this case, feedback should also be provided for each different rater source since one of the aims is determining the extent of agreement between and within sources;
- All instruments compare self-scores to other-scores. Again, if the aim is development this is extremely important. This often is the main information of interest to ratees and a starting point for their development;
- All instruments display feedback for both competencies and items. This is important since a score on a competency is not specific enough. For example, if scores for one competency are low, the ratee may want to know which behavior is responsible for it;
- All instruments report the means and range, except instrument 3, which reports results as a percentage. The availability of means and ranges (and the standard deviation) is important if changes between two ratings, (before training and afterwards) are being measured;
- Instrument 1 is the only instrument that compares scores to norms;
- Instrument 1 is the only instrument that contains a strength-weakness display;
- Instrument 1 and 2 contain follow-up directions.

Instrument development

- The basis for the instrument consists usually some sort of experience and/or theory, however no research. Though instruments are used in many organizations, not much is known about their reliability and validity.

Reliability

- Some research concerning their reliability has been done for three of the instruments. Internal consistency appears to be satisfying (.6 or higher) for instrument 1 and 2, but low for instrument 4. Whenever interrater reliability has been studied it appears to be low. Test-retest reliability has only been studied (in a limited way) for instrument 1 and appeared to be low.

Validity

- Validity has almost never been studied. Instrument 1 is the only instrument for which content validity was studied: it was found to be satisfactory.

Conclusion and limitations

Four Dutch instruments have been evaluated on the basis of a checklist containing important standards. The outcomes of this study give insight into the qualities of a number of 360-degree instruments in terms of their accordance with generally accepted personnel evaluation standards.

The examined instruments do not meet the standard that items should focus on easily observable behavior. Most of the examined instruments contain one or more items that are not formulated that way. Furthermore, only two of the examined instruments focus strictly on behavior that can be developed by the ratee. Regarding the feedback display, most instruments display feedback from different perspectives and all compare self-scores to other-scores and moreover, display feedback for competencies as well as items. The instruments are mainly used for personnel development, however vendors are more and more considering, or experimenting with, the use of 360-degree instruments for other purposes.

Depending on the specific purpose an organization has for a 360-degree instrument, it might prefer one or the other. On the basis of this study it is difficult to indicate one appropriate instrument to be used in training evaluation. Instrument 1 would probably be the most appropriate instrument for a research purpose. This is the only instrument that combines the possibility of competency selection, behavioral focus, focus on items that can be controlled and developed by the ratee, and feedback display of the mean and range for competencies as well as items, and from different perspectives. However, some items may need to be reformulated since they measure more than one behavior.

This study was limited by the fact that only a sample of Dutch instruments was involved. In the future, more instruments should be examined. This study can be used as a starting point for examining other 360-degree instruments.

Furthermore, the examination was based solely on document analysis and interviews with the developers and vendors of the instruments. Thus, the instruments have not been studied in practice and no raters and ratees have been interviewed.

Nevertheless, this paper provides a sound basis for developing better assessment instruments that can be used in the context of human resource development to accomplish various goals, one of them being the measurement of training transfer.

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The Perceptions of Physical Therapy Students Regarding the Provision of Transcultural Care

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By 2040, 23% of U.S. residents will not speak English. The PT profession has no culture-based theoretical models, limited research, and provides Western-based care. The perceptions of 12 entry-level Master's PT students of providing cross-cultural care were studied. Data was collected via a qualitative, emergent case study design using interviews, observations; and document review. Data analysis utilized inductive constant comparison approach and HyperResearch. The results revealed 5 domains. HRD could play a critical role in education and research.

Keywords: Transcultural, Physical Therapy, Education

Cultural Diversity is the reality of America in the 1990's (Porter – O'Grady, 1996). The United States is becoming the most ethnically diverse society in the world (Spector, 1995). Culturally diverse people are predicted to comprise the majority of the population in the next century (Loveridge, 1996). The nation's rapid shift towards a more racially, ethnically diverse population is driving the trend towards a more culturally competent medical work force in the US. From 1981 to 1991, the US Census Bureau reported that the population of Asian/Pacific Islander's living in the US increased by 87%, Hispanics/Latinos by 50%, American Indians / Eskimos / Aleuts by 42%, and African American by 15%. Demographic projects indicate that by the year 2000, one in every three Americans will be of color (Campinha-Bacote, 1996). It is anticipated that this "cultural gap" in the US will proportionately expand as the US adds approximately 125 million individuals in the next 50 years, if current birth and immigration rates are not changed (Clark, 1995). As a result, approximately halfway thought the next century, people of color will constitute the majority. This shift in demographics will have a tremendous impact on the medical profession, particularly Physical Therapists (PT's), and its provision of care.

Reflecting a cultural system in which individualization and independence are highly valued, American health care has traditionally acknowledged and emphasized the biological "cure" approach to treating the sick or disabled individual. However, the shift in demographics within the US is calling for medical professionals to provide "care" within the realm of the patient's cultural background. As a result, advanced medical practices is calling for medical professionals such as PT's to be responsible for delivering culturally sensitive care as well as managing a work force of diverse care-givers (Loveridge, 1996). According to Voekler (1995) this rising number of ethnically diverse patients in the US calls for medical professionals to acknowledge cultural differences when providing treatment and care. Spector (1995) stated that medical professionals must learn how to address the health care needs of this multicultural society by meeting the needs and responses of many different racial and ethnic groups who are competing for recognition.

According to Porter – O'Grady (1996), medical professionals must accommodate diversity in the populations they serve; they must be inclusive of diverse cultural practices; and they must become more culturally aware and culturally sensitive. However, most medical professionals have been well indoctrinated not only into the predominant Anglo-Saxon mentality due to its homogeneity and societal influence, but also have been enculturated into the traditional Western, Eurocentric, biotechnological medical culture. Hence, as the population changes, health care practitioners will need special skills to provide culturally sensitive and relevant health care for the diverse patient population (Lum & Korenman, 1994).

Currently the health care system revolves around a medical culture in which beliefs about diagnosis and disease are based on biological-technological model and are shared by most practitioners (Leininger, 1995). While some cultures define "illness" in terms of behavior and causation (Farley, 1989), this definition may be in sharp contrast to the Western medical view which primarily relies on the strict scientific definition of "disease and cure".

One factor that has become increasingly important in patient recovery, compliance, and satisfaction with treatment has been the health care provider-patient interaction (Auerbach, Martelli, & Mercuiri, 1983; Friedman, 1979; Korsch, Gozzi, & Francis, 1968; Korsch & Negrete, 1972). Korsch et al (1968) identified specific attributes of the medical professional-patient interaction that contributed to patient satisfaction including barriers to

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communication, health care professional lack of friendliness, use of technical jargon, and a restriction in discussion to purely medical considerations. Further research by Korsch and Negrete (1972) demonstrated the importance of patient satisfaction in relation to cooperation with medical advice. In 1995, Farley advocated that while physicians are not expected to fully understand all cultures, they should be sensitive to the fact that patients possess diverse culturally based health values. In 1994, Lum and Korenman found that physicians had difficulty treating patients with cultural values different from their own. A 1984 study indicated that 50% of first year medical student "felt unprepared to handle the cultural barriers between themselves and patients" (Mao et al., 1988). A 1987 study indicated that while many medical schools offered a "human values" course, the extent of cultural sensitivity training or information taught was not clarified (Bickel, 1987). In a recent survey of 126 medical schools (98% respondent rate), only 13 offered cultural sensitivity courses with 33 planning to implement some type of training into their existing curriculum (Lum & Korenman, 1994)

Research by Dowe (1990) revealed that most PT schools like nursing schools still offered a curriculum that is unicultural-based (medical model) and full of western, Eurocentric ideologies designed for the practicing health care professional who has limited knowledge of the culturally different patient. Prior to 1998, only four schools of 183 physical therapy programs, as compared to 25% of undergraduate nursing programs, included any content related to cross-cultural differences (APTA, 1997). In addition, the clinical and academic aspects of the Physical Therapy profession was not required to include and/or address individual or cultural differences, cultural sensitivity, or cross-cultural awareness especially in the assessment and treatment of patients. Currently, clinical practitioners address gender, age, and socioeconomic status with respect to patient care (APTA Standards of Practice, 1997). However, faculty, students and clinicians have not been expected to address cultural, ethnic, nor racial perspectives, issues, behaviors, attitudes, actions, values, or circumstances that a culturally diverse individual may bring into the medical arena. Unfortunately, in the last 5 years, there has been a significant (greater than 70%) increase in the number of "cultural collisions" reported by students upon returning from the clinical internships (APTA, 1997).

Educators in medical programs develop and provide knowledge, attitudes, and values, based on this belief system (Kleinman, 1978). Also, educators are responsible for preparing student who will practice ethically and effectively within this medical culture. According to Kleinman (1978), if these values conflict with patient's cultural beliefs, efficacy will be threatened. Therefore, medical practitioners must recognize and acknowledge the patient's own health beliefs and attempt to incorporate these beliefs, behaviors, attitudes, and action into the health plan (Lum & Korenman, 1994).

It is important to consider the theoretical basis driving the need for change. Traditionally, physical therapy as a profession has consisted of a homogeneous Eurocentric, Anglo-Saxon professional population interacting with either like or dislike patient populations. The diversity of patient population has generally been limited to ethnic or racial diversity localized within a specific community and typically chosen as an area or place of employment by the physical therapist. However, the traditional clinical communities are diversifying at phenomenal rates. The result has been greater exposure and interaction between the "traditional Anglo PT" and the diversified "minority" patient, often resulting in "cultural clashes" regarding the provision of culturally congruent care. Hence, the rapidly changing demographics and shift from American diversity towards a more globally diverse population has revealed the need to address additional behaviors, attitudes, values, beliefs, and knowledge. Each of these factors has recently become evident to the practicing clinician.

Another factor contributing to the need is economics. In a time of managed care when PT's are required to be more accountable, cost effective, and provide only essential forms of quality care and treatment, there is a need for more effective and efficient patient-professional interactions. For without effective communication, understanding of beliefs, goals, and priorities, or comprehension of cultural values (i.e. time, space, touch, etc.), treatment outcomes may be irreparably impacted. Hence, due to both external (societal) and internal (PT professional) developments, there is an increased need within the clinical arena and the PT profession as a whole, for the provision of cross-cultural or transcultural awareness, care, and competency.

It appears imperative from the lack of cross-cultural research within the profession and the lack of a theoretical framework from which to build curriculum and clinical practice that: 1) the issue of transcultural care or cross-cultural diversity should be addresses in general; 2) physical therapy students should be prepared to effectively interact with and/or handle the cultural diversity they will encounter with patients (i.e. cultural differences and potential collisions); and 3) students should be prepare to provide transculturally congruent and competent care. The concern is that without adequate cross-cultural instruction or only superficial exposure to cross-cultural content, students who become clinical practitioners will encounter cultural barriers and/or situations which can lead to misunderstandings, poor clinical judgments, inadequate or inaccurate transference of patient information, resulting in ineffective patient care.

Currently the need for PT's to be culturally competent or to practice transcultural care has been remiss. The theoretical basis for cultural knowledge, skills, attitudes, and beliefs as well as cross-cultural experiences had not been proportion to the changing demographics in the US. While traditional PT education provides a means to guide PT clinical practice and education in a variety of settings, it does not always adequately address the needs of the minority, immigrant, or foreign-born (temporarily located) individual. It can be argued that PT education should be examined for its transcultural applicability and usefulness, especially as PT's seek to increase their cultural competence.

Theoretical Framework

The idea that culture is not new, but it is not well advocated either. While the works of Hofstede and Trompenaars are well indoctrinated within the HRD, HRM, and cross-cultural business arena, they are non-existent within the PT profession. In reality, PT has no theoretical models and more specifically, no cross-cultural models upon which to stand and grow. Since Physical Therapy does not possess a theoretical foundation for evaluating, developing or implementing a theoretical model of transcultural care, it must turn to nursing, as it was the profession most closely aligned with PT. It is also important to realize that while there are several similarities between nurses and PT's, there are some critical differences. However, nursing has a 40 year history of pursing the issue of providing culturally congruent care and as a result have developed three models: Orem's Self Care Deficit Theory, Campinha-Bacote's culturally Competent Model of Care, and Leininger's Theory of Culture Care Diversity and Universality.

Leininger's Theory of culture Care Diversity and Universality was utilized in this study due to its strong research foundations, wide usage and acceptance by North American nurses, and potential alignment with PT and the provision of care. In 1976, Leininger presented what she called the "Transcultural Health Model" (AKA: The Sunrise Model of Transcultural Care) which she described as "structural functional culture-based model" in that it included major social and cultural influencing health care systems and the provision of care. In short, Leininger's Theory of transcultural care focused on generating knowledge related to the care of people who value their cultural heritage and life ways. This theory has great significance and applicability to physical therapists because PT's are realizing that in the present and future they need both an awareness and understanding of "cultural knowledge" to guide them in their decisions and actions as they care for patients from various cultural backgrounds.

Leininger also states that "culture" is the link to understanding and providing (nursing) care to individuals from different backgrounds. In her initial research, Leininger determined that "care and culture were inextricably linked together and could not be separated in nursing care actions and decisions" (Leininger, 1988). Through observations, Leininger determined that traditional western medical practice was oriented towards "curing" while nursing was oriented towards "caring acts and processes focusing on multiple factors influencing wellness and illness" (1980).

In addition, Leininger believes that care is a universal phenomena that exists in all cultures, but at the same time expressions, meanings, and forms of care may differ from culture to culture (Leininger, 1985). Researchers have utilized this theory because it includes holistic and particularistic dimensions of cultures and care with regards to meanings, patterns, and expressions which are predicted to be embedded in world view, social structures, language, ethnohistory, religion, technology, education, and the environmental context of the patient (Leininger, 1988, 1991).

According to Leininger (1988), when differences exist between cultural values, beliefs, and practices of the client and the health care professionals, then undesired outcomes can occur. In addition, this theory places great importance on the need for health care professionals to study the values, meanings, and expressions of care among diverse cultures in order to understand and provide culturally congruent care using caring behaviors. In summary, her theory proposes that medical professionals can contribute to the health of the client by providing care that is congruent with their culture.

Purpose of the Study

The purpose of this study was to explore the perceptions, feelings, attitudes, and receptivity of 12-second year students within the physical therapy program regarding the provision of culturally congruent transcultural care in the clinical setting. Prior research by the nursing profession has demonstrated that it is important to consider and investigate not only the participants' perceptions, but also their attitudes and degree of openness. The researcher sought to uncover the various demographic variables and prior cross-cultural experiences which may have been involved in one's perceptual acuity or receptiveness towards cross-cultural interactions. In addition, it was important for the researcher to explore the extent and handling of perceived "cultural collisions" experienced during the participant's recent full-time, 8-week clinical internship.

Prior research within the medical field has documented that cultural collisions occur largely due to a variety of factors including language barriers, a lack of awareness of traditions or cultural rituals, and ethnocentrism by medical professionals. Lastly, the researcher investigated the type of information students perceived to be beneficial in viewing or handling "cultural collisions" differently. Over the past three decades, the nursing profession has been actively addressing this issue via the creation of expert advisement panels, a transcultural journal, and instructional recommendations for academicians. Physical Therapy has yet to investigate, pursue, or apply any intervention strategy.

Research Questions

The central research question for this study was: "What were the perceptions of second year entry-level Master's Physical Therapy (PT) students regarding the provision of culturally congruent transcultural care?". Second year students were selected as they have limited exposure to patient contact and interpersonal interaction while in the PT program. The first year is focused on the basic sciences; the second year provided instruction on physical agents, therapeutic exercises, and rehabilitation techniques, and the third year provided instruction on ethics, interpersonal clinical skills, and advanced techniques. In addition, between the completion of the second year of the program and the beginning of the third and final year or professional preparation, the PT student embarked on a full-time, 8 week clinical rotation which involved continuous interpersonal connections and potential cross-cultural situations.

In addition, eleven sub-questions were formulated including:

1. What were the demographic and background variables of the participants?
2. What type of prior cross-cultural encounters did the students' experience and what was the extent of impact on their lives?
3. What does providing culturally congruent care mean to the students?
4. What personal to ethnohistorical experiences did the student perceived as best preparing them for providing transcultural congruent care?
5. What were the students' perceptions regarding the preparation for transcultural interactions with respect to the provision of culturally congruent transcultural information?
6. What academic vs. clinical approach would students recommend for the inclusion of this information?
7. What was the extent of cultural collisions students experienced during their first full-time 8-week clinical rotation?
8. What role did the PT-patient relationship and clinic interactions play in the provision of culturally congruent transcultural care?
9. What instructional information would have assisted students to perceive and respond to "cultural collisions" or "cultural clashes" differently?
10. What components of providing transcultural care are similar between physical therapists and nurses?

The above questions formed the basis of questions asked during the interviews, observations, and unobtrusive records (documents/artifacts) analyzed for the purposes of this study.

Methodology / Research Design

This study used a qualitative emergent case-study design using ethnographic methods, which allowed all participants' voices to emerge and be heard. The purposeful sample consisted of twelve-second year physical therapy students from a 3-year, entry-level Master's degree Physical Therapy program housed within a state institution located in a Mid-Atlantic state. Students were randomly selected from a pool of 54 (the class size) by a gatekeeper according to the established criteria. The research criteria for inclusion included: 1) second year PT students; 2) students who have successfully completed an 8 week, full-time clinical rotation; and 3) student who represent the "cultural diversity" of the PT profession. First, the participants were grouped by gender and randomly selected in proportion to the profession (profession = 82.2% female / 17.8% male). In the second step, the subjects were grouped and randomly selected by their identified race in proportion to the percentages of representative races of the profession (91.5% white / 2.9% Hispanic / 2% African American / 1.6% Asian / 1% Native American / 0.8% Other). It is important to note that this class of students did not consist of any Hispanic or Native Americans students. Hence, the researcher's participant pool consisted of 2 males, 10 females, 9 Caucasians, 2 African Americans, and 1 Asian. Alternates were identified in each category. Participation was voluntary and informed consent was received prior to data collection. One subject refused to participate and an alternate that was consistent in terms of gender and race was utilized.

The researcher in this study used three methods of data collection. First, in-depth semi-structured, open-ended ethnographic interviews were used to collect "thick descriptions" of participant meanings of effective cross-cultural care. Two interviews were conducted by the researcher. The first interview focused primarily on gaining demographics, background data, and general cultural-related terminology. The second interview addressed the participants' cross-cultural interactions, perceptions of transcultural care, and any "cultural collisions" involving patients. The interviews ranged in length from 90 minutes to approximately 150 minutes. All interviews were taped and conducted in the student's academic (PT school) environment between Sept. 1, 1998 and Sept. 30, 1998. A complete log of all fieldwork as well as a reflective log was maintained.

The second method of data collection involved observation of the environment and the informant's non-verbal behaviors, actions, reactions, etc. by the researcher. All participants were informed and consented to having their non-verbal behaviors as well as the environment be documented. Field notes were completed to include nonverbal descriptions of the site, place of the interview and the respondent. Nonverbal behavior was used to confirm verbal statements and to act as a cue for further probing when disagreement between verbal and nonverbal behavior was noted.

Third, additional information was obtained from the participant's file, collection and review of professional documents/artifacts, and second year curricular materials, which detailed and exemplified the informants exposure to the topic of interest, specifically the provision of transcultural care. The documents reviewed included: 1) the Normative Model of Professional Education (for PT's); 2) a copy of the PT school's accreditation standards; 3) a copy of the Standards of Professional Conduct; 4) a copy of the Code of Ethics; 5) a copy of the Standards of Care; and 6) a copy of the randomly selected second year PT students notes from all second year courses. The material was reviewed and analyzed for similarities and dissimilarities with the informants' reported academic exposure.

Data Analysis and management was conducted using inductive analysis via an on-going basis. A constant comparative method was used to recognize the similarities, differences, and consistencies of meaning across the data. Computer software allowed for all data to be entered and non-alphanumerical symbols were used to tag words, phrases, and sentences. In addition, the researcher utilized HyperResearch (1991) to categorize data. Through this dynamic ongoing process, codes were constantly compared, added, merged, renamed, or discarded. The codes were categorized into certain domains, which then allowed the researcher to identify themes. In addition, triangulation was used to check agreement between the participant's perceptions of the presenting factors, observations, and a review of the curricular instruction. All transcripts, filed notes and logs (reflective, methodological, activity) plus the decision rules and various forms / letters were utilized to mange this study. The entire data collection and management process underwent outside analysis via an audit trail, which confirmed the rigor and validity of this study.

Results with Findings

Five major domains emerged from the data: 1) personal preparation; 2) prior medical care preparation; 3) academic preparation; 4) clinical preparation; and 5) the provision of culturally congruent care. Each domain contained several sub-themes. The first domain, personal preparation, captured the informant's personal ethnohistory, their comments on their personal cross-cultural experiences, environment, and what they perceived as contributing to their cross-cultural awareness and preparation for providing culturally congruent care.

The second domain, prior medical preparation, focused on the informant's level of comprehension regarding basic cross-cultural terminology, ethnohistorical health orientation regarding the cause of illness, their philosophy regarding the provision of care, and the extent of receptiveness to alternative approaches to care.

The academic domain, focused on the CAPTE professional accreditation standards and the various forms of instructions the informant's perceived including: instruction provided, instructional content retained, and desired instructional information including topics, formats, instructional strategies, and presenters.

The fourth domain, clinical preparation, addressed the extent of clinical preparation that the informant's perceived and experienced including the frequency of cultural clashes, common barriers, and modes of approaching and handling cross-cultural situations.

The final domain, the provision of care, emerged to organize the student's perceptions of cultural care related terminology and how they perceive their role in providing culturally congruent care. It also addressed the informant's perceptions of cultural awareness in relation to the cultural continuum and the profession of physical therapy.

The overall findings and four recurrent themes of this study were: 1) a lack of personal and professional cross-cultural awareness; 2) limited recognition and integration regarding cross-cultural preparation; 3) inadequate resources both academically, clinically, and professionally; and 4) insufficient value or emphasis placed on the need for cross-cultural preparation by PT professionals.

Conclusions and Recommendations

Clark (1997) noted that assimilation, acculturation, and social experiences influence culture. Since students are indoctrinated in the traditional western biotechnological medical model which derives from Eurocentric origins, it is only reasonable to assume that PT's approach the provision of care form the dominant society culture, their own cultural perspective, and the medical culture. While the demographic data was consisted with the profession as a whole and the participant's reported being fully assimilated into North American society and culture, they noted that they never realized how little of their own personal cultural heritage they had retained or integrated into their adult being. In addition, the informants verbalized that very little ethnic and racial cultural traditions had not been "handed down" and as a result, they did not really know "who" they were or how that might impact their interactions with patients. Hence, there resides the possibility of non-alignment or a "breakdown" in cross-cultural patient interaction.

As a theoretical reference, Leininger's Sunrise Model of Cross Cultural Diversity and Univserality with its 10 main components was utilized. However, the informants only focused on three of the 10 components outlined by Leininger including religion, education, and other environmental influences. While there does not appear to be any clear-cut answer for these findings, one can hypothesize that it is because of the "approach" that the students have been educated in. In other words, as a profession, we have stressed the technological, expertise-based attitude in which we serve the public by providing "care" from a biotechnological model instead of from an individual, patient-based or "caring" approach. As a result, perhaps PT's tend to focus on things that we, as a profession, emphasize or encounter more commonly and/or which impacts our ability to provide care.

These findings indicate that perhaps Leininger's model is not an appropriate prototype for the PT profession to use in its search for an applicable and appropriate model. Upon reflection, perhaps Campinha-Bacote's Culturally Competent Model of Care would be more aligned with the PT profession. Campinha-Bacote's Model states that clinicians must have cultural knowledge (theoretical and conceptual frameworks), cultural encounters / experiences, cultural awareness (including cultural sensitivity and cultural biases) and cultural skills (cultural assessment tools) in order to effective in cross-cultural patient interactions and providing culturally congruent care.

More specifically, Campinha-Bacote states that cultural knowledge is a process in which medical professionals seek and obtain a sound educational foundation concerning the various worldviews of cultures. In order to obtain cultural knowledge, one must understand the relationship between culture and health practices. An extension of this component is Campinha-Bacote's use of cultural encounters, which she identifies as the process that allows medical professionals to directly engage in cross-cultural interactions with patients from culturally diverse backgrounds. In addition, Campinha-Bacote recognizes that while health care professional may possess the cognitive ability to understand another's cultural beliefs, practices, and lifeways, they may not possess the skills required to provide culturally congruent care. Overlaying all of these components is the need to be culturally sensitive, which according to Campinha-Bacote not only requires medical professionals to be aware, but also to learn, practice, and provide a culturally responsive approach to providing culturally congruent care.

However, there is limited research utilizing this model possibly due to its recent invention (1997) which may prohibit its acceptance and adoption by the PT profession and community. So, while Campinha-Bacote's tactic takes a clinician to patient hierarchical approach and indicates that it might be more appropriate for the PT, it also raises the question of where PT's "stand" regarding the provision of care. Do we stand on the side of the "expert" or the "care giver"? This remains to be seen and yet may place a crucial role in the model that we, as a profession, finally adopt.

One striking finding of this study was the lack of familiarity with culture related terminology. While students were able to identify terms such as race, ethnicity, and culture, they were less able to define phrases like multiculturalism, cultural diversity, and cultural relativism. This process was repeated with the exploration of providing care. While students could easily define care, quality care, the role of the professional, they were unable to define cross-cultural care, transcultural care, or culturally congruent care. Is this a sign of inadequacy within the profession or is it rather simply an omission in their education? Or is it simply that PT has not been exposed to the works of Hofstede and Trompenaars? Or is it that PT has had no one to transcend its boundaries that might be educated in the cross-cultural arena? One is hesitant to draw conclusions. However, all of the subjects were subjected to the era when the push in education was multiculturalism. Win addition, while many believe that PT is a derivative of and housed in the social sciences, it is been "raised" by the medical community and hence, has a limited scope of practice. In addition, until recently, it did not have educators or researchers or minorities within its ranks who could broach the subject to the profession at large.

Finally, one of the major findings of this study was the lack of connectedness between an individual subject's personal ethnohistorical and medical philosophical roots and their prior academic and clinical exposure to their perspective in providing care. Again, it raises the question of "who are we?" and "what do we bring to the table?" It also begs the question of if we do not know who we are and are not educated in how to provide care, they how can we, as medical professionals, provide culturally congruent care. Or instead, do we just provide care that is more along the lines of "one fits all?" If the latter is the case, then it raises the question of how do PT's justify this type of care as the provision of quality care which is supposedly care that is in the patient's best interest?

In conclusion, the present study suggests that the framing of cultural issues, identification of common barriers, and acceptance of a diverse patient population who may require adaptations or modifications in treatment, is essential to the provision of culturally congruent care. However, the inclusion of cultural issues within the Physical Therapy profession is in its infancy. It has yet to take a firm hold.

It is hoped that this study will act as a spark plug or springboard for raising awareness, initiating productive discussions, and ultimately lead to the implementation, collaboration, and cohesion of cultural competence via academic and clinical education. The ultimate goal is to promote cultural competence in and throughout the Physical Therapy profession. However, this will require a strategic and unifying vision on the part of the profession, educators, clinical practitioners, and other cross-cultural professionals.

Application to HRD

Perhaps the strongest application to the field of Human resources is a cry to help. Human Resources, as a profession, have the resources, knowledge, skills, and ability to educate a profession that is lost and only beginning its journey of exploration and inclusion. PT does not know the best way to become "culturally competent" or even "culturally aware". We need HRD to show us the way.

While the medical arena has long only accepted the assistance of HRD from a business or financial aspect, it is time for it to be more accessible. While many clinical environments are undergoing the stresses of managed care and the "unexpected" influx of culturally diverse patients, they are also trying to discover their "vision". Fortunately, most clinical arenas have taken notice that addressing cultural and individual differences is a necessary key to survival. In addition, most have begun to realize that the traditional narrow biotechnological focus on patient-client management using the traditional western medical model will not longer work. Instead, we need new avenues, we need new options, we need new resources, we need HRD.

One approach may be for HRD and PT educators to work jointly on providing continuing education courses. This would allow PT's to access the wealth of information and experience that HRD professionals possess regarding cultural diversity and handling cultural differences. To gain widespread attention, it might be feasible to consider working the profession's National Headquarters and more specifically with the APTA's Office of Minority Affairs to increase the availability of information, tools, and resources. With respect to the clinical arena of professionals, one approach might be for HRD professionals to conduct a half-day seminar at the National PT Conference. A third option might be to conduct a short course the profession's Annual Combined Sections Meeting (CSM), as this is the "coveted" arena for PT educators and researchers. This type of seminar could also be conducted on a smaller scale at State or Regional meetings.

Another possible approach would be to create a "Helpful Hints" textbook or reference book geared towards the medical professional and more specifically towards PT's. While PT's would benefit greatly from knowledge regarding the various "in's and out's" of the various world cultures, we specifically need information on touch, disrobing, exercise, communication (verbal and non-verbal) as well as cultural barriers and offenses. A final solution may be to conduct collaborative research between HRD professionals and PT practitioners, educators, researchers, and administrators.

While the medical profession, and more specifically the PT profession, has been reluctant to address this issue, it will soon be searching for appropriate and applicable information, resources, and web sites. Unfortunately, I do not foresee the PT profession actively seeking out knowledge beyond the medical boundaries. As a general and unspoken rule, we are too territorial to even reach beyond our on professional "turf". So, while we may half-heartedly seek the knowledge and information that we desperately need, we will not openly admit that we need help.

either from within the medical community or from outside. It seems that if we are to grow, someone, perhaps HRD must actively extend a hand and show us the way and be ready for us to kick and fight the entire way.

It all comes down to opening the doors of communication between two worlds – one that has functioned for most of its existence in a vacuum and the other that has made it its mission to go out and boldly explore. While HRD has transcended the various dimensions of professional fields, dimensions, and actively sought out new knowledge, medicine has focused all of its energy on the biotechnological techniques, which is consistent with its model. We, the medical professionals, have begun to realize that we can no longer function in our shell, but need the HRD profession. We need the HRD profession to show us "how" to grow, to give us the knowledge and skills to be effective and successful with patients of diversity, and to warn us of the cultural offenses that we may encounter as well as how to handle them.

HRD has a wealth of information that it could share with the medical field. Our research or lack thereof, demonstrates just where we are. Hence, the application to HRD is multiple. HRD has the opportunity to enter a new arena as an educator, researcher, consultant, administrator, and practitioner.

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An Intercultural Training/Consulting Process and its Implications on Meaning Making and Organizational Change: The Case of a Hungarian Organization

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This paper presents an in-depth look at an intercultural training/consulting process between a HRD team from the UK and a large public service Hungarian organization using the case study methodology. Although conceptual pieces related to working and communicating across cultures by using interpreters/translators are present in the literature, there is a clear lack of empirical data for understanding the processes involved and learning from them. Based on a preliminary analysis, implications for HRD research and practice are presented.

Keywords: Intercultural Training, Hungary, UK

More than eight years after the fall of the Berlin Wall, the economies of Central and Eastern Europe are at varying stages of political, economic, and social reform. Each of the formerly centrally planned economies has developed its own approach to economic restructuring based on its own culture and social traditions. As Czinkota (1998) described "since the Iron Curtain has disappeared, new paradigms have emerged which few, if any of us, would have dared to even consider a mere decade ago. In managing these economic transformations and their effects, both in the former communist nations, as well as in other countries of the world, there are very few guideposts. It is not as if one can point to established thinking, successful models, or proven theories on the changes taking place. We are learning by doing, and can only hope that by cautiously employing our best current thinking, we can avoid making too many mistakes." (p. 39)

The world is witnessing and participating in a substantial restructuring of the global economy. At the doorstep of the European Union, with a market of over 300 million big-spending consumers and a relatively skilled population, Central and Eastern Europe have many advantages that make investing in the region attractive. According to Child & Czegledy (1996), Hungary is one of the countries in this area that has made the most extensive internal changes and developed the strongest economic relations with Western nations. Its advanced level of social and economic development that it had achieved before the imposition of socialism and its historical, cultural, and geographical propinquity with neighboring European countries like Austria and Germany enabled it to transform rapidly away from former socialist institutions.

Studies conducted in Hungary recorded managerial learning amidst organizational change as a result of acquisitions by (Villinger, 1996) and joint ventures with (Simon & Davies, 1996) western organizations. The findings show that the main barriers to learning were language problems and different cultures, mentalities and attitudes to business. The findings also show that the foreign expatriate managers made little attempt to learn Hungarian or to familiarize themselves with the country and that the Hungarian managers felt that they were looked down upon by the expatriate managers who considered themselves superior. As western know-how is penetrating the region either in the form of investment or training/consulting the authors of this paper, intrigued by the problems raised by intercultural collaborations, set on a quest to understand the process and challenges of such a collaboration brought force by a large Hungarian public sector organization's need to change.

The Setting

The research took place in a Hungarian organization which is a public sector institution with more than 130 years of experience in serving its constituents. The change of the political system at the beginning of the 1990's resulted in an explosion-like increase in the number of the organization's clients as the number of active businesses increased

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nearly 100-fold. At the same time the types of clients and their expectations have also changed significantly. The transition process itself had left the organization in a vacuum as the government sorted out what it really wanted to do. Salary levels within the organization were very low and recruitment of quality graduates had nearly ceased. The president and deputy presidents of the organization realized the urgent need for change and asked for help from a UK human resource development team which proved successful in working with a similar organization in the UK. The seeds of the collaboration were planted in 1992 with the commitment of the president for change and it began in 1993-1994 at a visit of Hungarian senior mangers to the UK followed by another visit in July, 1995 to discuss the design and delivery of a series of management development events (e.g. change management, crisis management and team building) that would constitute the catalysts for change in the organization.

The role of the UK team was to help the organization achieve the following long –term objectives: help employees recognize the need for change, create the framework necessary to implement change, manage change, identify with the mission, vision and values of the organization, use and interpret the mission, vision, and values of the organization in professional activities, making the organization self-sufficient in management training (Project Report). Over the past two years several workshops were held in Hungary and the role of the UK team moved from external experts to in-house facilitators, mentors, and coaches all this with the help of interpreters. At the time the authors of this paper began to talk about the challenges of intercultural collaborations especially when the communication is taking place through interpreters, the need for understanding the processes involved in this UK-Hungarian collaboration project and for recording the lessons learned became eminent.

Theoretical Framework

Child (1981) suggests that although organizations throughout the world are growing more alike at the macro-level (structure and technology), within these organizations individual behavior at the micro-level (communication and interaction) maintains its cultural specificity. Intercultural/global trainers and consultants are constantly made aware by and sensitized to the challenges they have to meet when working with different cultures (Hofstede, 1984; Hall & Hall, 1990; Wigglesworth, 1995; Landis & Bhagat, 1996; Trompenaars & Hampden-Turner, 1997). Wigglesworth (1995) describes the cultural determinants affecting intercultural organizational development and change efforts. These are the values, perceptions, cultural heritage, and unique ways of doing business in a culture. Trompenaars & Hampden-Turner (1997) contend that one cannot understand why individuals and organizations act as they do without considering the meaning they attribute to their environment. Understanding this meaning is made more difficult when communication is mediated by an interpreter. As Varner & Varner (1994) noticed "using a translator complicates any business seminar. The speed of exchange is slow and frustration increases for trainer and participant. The problem is vastly increased if the translator does not have a strong business background or if the participants do not know the concept in their own language" (p. 367).

Language is vital to human communication, and through language meaning is created (Blakenship, 1974) and people create, manage, and share social reality (Berger and Luckmann, 1966). Past research into language has explored the nature of meaning by exploring the relationships between words and things and by examining how interaction transpires. Heath & Bryant (1992) identified four different conclusions on meaning from that research:

1. Meaning is the response the source's words produce in the receiver's mind.
2. Meaning is the product of the relationship between thoughts and the objects of thought - what people think about.
3. Meaning is the impact conventionalized symbol systems (idioms) have on perceptions and actions of the people who use and live the perspectives embedded in each idiom.
4. Meaning is what emerges when persons involved in communication interpret the intentions behind what each other says.

Cherry (1978) argued that words are signs that have significance by convention, and that those who fail to adopt the conventions simply fail to communicate. For Cherry, "the language of a people largely constrains their thoughts. Its words, concepts, and syntax, out of all the signs people use, are the most important determinant of what they are free and able to think" (p. 73). Similarly, Burke (1966) in discussing linguistic relativity argued that vocabularies express perspectives. As such, people from the same culture share perceptions and unique perspectives because of the particular language they share. The work of both Cherry and Burke has implications for training and consulting through interpreters. For example, words in the language of the sender may have a completely different perspective once translated into the language of the receiver. Indeed, the words, once translated, may have no meaning at all in the receiver's language.

Theories associated with coordinated management of meaning come from a proposition that people co-create, maintain, and alter social order, personal relationships, and individual identities; and that communication is the process of maintaining and creating relationships. Meaningful conversations therefore require that the actions of each person must be meaningful to the communication partner, so the receiver picks up what s/he sees and what s/he hears, resulting in meaning interpretation at two levels: content and relationship. Within one culture, people interpret messages and know what actions constitute appropriate responses because they know what the content and the relationship mean in their culture - what then if the meaning is delivered via an interpreter? That process can have implications for both the content and the relationship, potentially impacting on the meanings received.

Examining the process of knowledge transfer across linguistic boundaries, Jankowicz (1999) uses the "export sales" and the "new product development" metaphors. The "export sales" implies that both parties (the donor and the recipient) share the same conceptual background and assumptions, thus the knowledge (product) is transferred (sold) to the recipient who with appropriate instruction will put it to use. The "new product development" metaphor on the other hand considers the two parties as co-equal collaborators recognizing that every language encodes phenomena differently, thus the meaning encoding by one party could be subtly different from the reality encoded by the other. The author proposes the use of "mutual knowledge creation" based on the negotiation of new understanding instead of "knowledge transfer" from the change agent considered to have the "correct" or "appropriate" knowledge to the indigenous party whose uncertainty would be resolved by this relationship. This negotiation is crucial when different cultures and languages are involved in the process.

Kameda (1996) also emphasizes that words do not mean, only people "mean" and the meaning will depend greatly on the culture of those involved and on the particular situation. Beamer (1995) contends that "especially when communication takes place across cultures, and different languages are involved, we need to keep reminding ourselves that the world and the thing to which it refers are not the only components in communication: the thought or reference is also present in the mind. No codebook can directly map an equivalence of meaning to word and satisfactory explain what it is for mental proposition to have meaning in another culture" (p. 141). Thus the role of interpreters is crucial for any international training/consulting process to be successful as the biggest challenge faced by an interpreter is "mapping the meaning encoded in one language onto the meanings that it is possible to encode in another" (Jankowicz, 1999, p. 319). Sherblom (1998) citing Halliday states that "language in the context of culture is a semiotic system and a metaphor of reality. Reality, in turn, as a social construct, is a metaphor of language, constructed through an exchange of meanings that constitute that reality" (p. 75). This leads us to consider the implications for the construction of social reality through language by using interpreters and by introducing the interpreters' subjectivity as indeed must happen as they "interpret" the sender's message in a cross-cultural collaboration process.

Research Questions

The purpose of this case study research was to gain an in-depth look in an intercultural training/consulting process in order to understand the perceptions of all parties involved (UK team, Hungarian partners, participants and interpreters/translator) regarding this process, its impact on the organization and to record the lessons learned for best practice in similar situations. In order to attain the purpose of this study, the following research questions were investigated:

1. How did the parties involved (UK team, Hungarian partners, participants and interpreters/translator) perceive the intercultural training/consulting process?
2. How did the Hungarian participants perceive the impact of this process on their organization?
3. What were the lessons learned by all the parties involved in this process?

Methodology

A qualitative case study research methodology was decided upon by the authors of this paper. This decision is best illustrated in Merriam's (1988) words describing how "this design is chosen precisely because researchers are interested in insight, discovery, and interpretation rather than hypothesis testing" (p. 10). Yin (1984) also noted that the case study is a design particularly suited to situations where it is impossible to separate the phenomenon's variables from their context. As the intercultural collaboration process under study was deeply imbedded in the Hungarian - British culture and the authors sought out its holistic understanding, the case study research seemed appropriate in this situation. The use of multiple methods of data collection to allow for data triangulation and thus, validation of findings, is recognized as a major strength of case study research (Merriam, 1988; Yin, 1993; Stake, 1995; Marsick & Watkins, 1997). A thorough audit trail was also maintained all along this study.

Data collection took place during the month of July, 1999 and continued until the beginning of September, 1999 when final documents were gathered. The following multiple methods of data collection were used in this study:

- Observation of two one-day workshops on Team Building facilitated by two of the UK team members
- Documents/handouts presented at different workshops (Hungarian and English versions; to uncover inconsistencies and meaning of translated concepts)
- Company documents -- the Mission, Vision, Values document (in Hungarian -- a result of the training/consulting process), the historical overview of the organization published in 1992 at the celebration of 125 years of its existence and two reports on the progress of the Management Development Project.
- Participants' responses to the "Review of the Management Development Project" questionnaire sent out to participants about 8 months after they attended the residential workshops.
- Seventeen action plans presented by the participants as a result of the workshops.
- Twenty one interviews

Interviews were conducted with 16 Hungarian participants (two of them were also the partners in establishing and sustaining this collaboration), 3 interpreters (one of them also translated some of the materials) and 2 UK team members who were the trainers of the observed workshops and the main partners representing the UK team in this collaboration. The participants were selected to represent each of the organization's departments and each of the functions within the organization (deputy president, head of department, regional director, head of division, legal adviser, employee). Both genders were represented. Totally 12 females and 9 males were interviewed. All interviews were conducted face-to-face by the first author of this paper in the mother tongue (Hungarian or English) of the participants. The interviews were recorded with the consent of the interviewees. Confidentiality issues were addressed and it was agreed that all results will be reported in aggregated form. Due to lack of time, the interviews with the UK team members were continued by e-mail.

The interviews with the two Hungarian and two UK partners were focused on their insights regarding their collaboration and their insights as participants and trainers/consultants respectively. The participants were asked about their insights into the process (e.g. How much did you understand from the presentations? Did you find the presence of the interpreter helpful? In what way? How did you find the work/attitude/behavior of the interpreter? What could the interpreter have done to help you more in understanding what was said? Were the concepts presented clear to you? Do you think you have grasped the meaning of the concepts presented? Did you talk with your colleagues about those meanings? Do you think the meanings of some concepts changed over time for you? How did you find the examples used by the trainers? Did they help in understanding the concepts or situations? Were they connected to your everyday job/life? To what extent, if at all, you had a chance to use in practice what you have learned? What were some of the barriers? What would help you in their implementation?). The interpreters were asked about the way they prepared and worked in this process and about what would they do or like to be done differently if they would think of an "ideal" situation.

The interviews were transcribed verbatim by the first author and the translation of the interviews is still in process. The transcribing of the interviews began in September, 1999 and as the translation involves a multi-step process, it is very time consuming. As Sherblom (1998) described "Carefully translating a text from one language into another is not adequate to complete that process. The text must be translated back again, making the process bi-directional rather than uni-directional. Following this bi-directional translation, the communities of translators resolve differences, thus recognizing the dynamic and ambiguous nature of meaning and of its communication" (p. 75). The validity of the translated materials is verified through back translations and re-translations of parts of the data by the first author of this paper, who has over 15 years of experience in translating/interpreting from and to Hungarian and English, and a professional translator who is Hungarian and presently lives in the United States. As one of the authors of this paper does not speak Hungarian, the translations are necessary in order to be analyzed by both authors. Five in-depth interviews were translated and analyzed together with the other data gathered. Thus, the results of this study are based on this preliminary analysis and the analysis of documents and observations.

Content analysis with the sentence and paragraph as basic units of text was used in coding and analyzing the data. Both Weber (1985) and Miles and Huberman (1994) contend that the reliability of human coders should be assessed. Intercoder reliability is suggested to assess the extent to which content classification produces the same results when the same text is coded by more than one coder. This was accomplished in this study by both authors coding the data separately and by the help of a practitioner with work experience in similar Hungarian organizations who coded parts of the data. The first named author of this paper is Hungarian and studies change processes in Central and Eastern Europe and was an outsider to this Hungarian-UK collaboration project. The second author is affiliated with the UK team and as an insider to this collaboration project was involved in the initial design of the program and facilitated the entry of the first author into the setting. As both of us have many years of experience in working in cross-cultural settings, we naturally have our own biases regarding the processes involved. In order to account for them, we took fieldnotes and memos and discussed them by phone or e-mail. Bogdan and Biklen (1992) referring to one of the characteristics of qualitative research - the researcher as instrument in qualitative inquiry - state that while it is considered a limitation of this approach, it is also its strength as "in no form of research are the process of doing the study and the people who are doing it so consciously considered and studied as part of the project" (p. 123). Thus, taking fieldnotes and memos during a qualitative study where the researchers are considered the instrument is very important. It is a way to acknowledge and control for researchers' biases.

Results and Findings

The participants talked in length about the difficulties in understanding some of the concepts presented. Although most of them understood English they were not proficient enough to follow the whole session in English and when they got tired relied a lot on the interpreters. Some of them also noticed when the interpreters were not clear in their interpretation. One of the managers described how

> There were a number of new concepts we had to understand. If you don't constantly live in that (the one of the trainers) linguistic environment, you're going to encounter some difficulties. Many times we were like: "What's going on?"... Then it was really great to have that guy (the interpreter) at hand – even if he distorted the meaning somewhat at times. When you are in the simultaneous mode, you've got to say something, even if you make it up. Sometimes he hit the nail on the head, sometimes he didn't. But at least he came up with a translation.

The participants and one of the interpreters who also translated some of the materials and worked in the organization also talked about the difficulties of translating business concepts, and how they required repeated explanations using multiple descriptive sentences to understand what the trainer meant by the concept. The participants also felt that there was a lot of material presented and sometimes they did not feel comfortable interrupting the presentation for clarifications until towards the end of the day. One of the managers talked about how she and her colleagues "combined efforts to understand each other" and another one mentioned how they "were left wondering whether that was really what they (the trainers) meant by a certain term" until the assignments were completed. Another manager also described how their understanding of the concepts was validated after the completion of the assignments. He said:

> "We mainly discussed these issues among ourselves, tried to interpret what is really required from us, and then completed our assignment according to our interpretation of the task. It would usually turn out during the presentation of the results whether we were right or not. Sometimes we realized that there was a major misunderstanding. Now in those cases the trainers would clarify the concept again for us."

Speaking about the difficulties in translating/interpreting some of the concepts, both participants and interpreters agreed that "some of the concepts are only clarified during the presentation, when they are defined in full. Both the interpreter and the translator from the organization who translated parts of the materials and interpreted three of the five-day workshops would have liked to have the opportunity to clarify with the trainers concepts not clear to them before the workshops. The UK team members also acknowledged the necessity of spending a little longer time with the translators in running them through the process they use as facilitators.

As a result, some of the words like "stakeholder" were translated as "flag bearer" when it was later understood that it referred to "interested parties." This misinterpretation was mentioned several times both by participants and interpreters/translator. It was also difficult to translate the "shadow side" which translated word by word had a negative connotation as well as the word "agent" which has an undesired political meaning stemming from the former communist system. The interpreter/translator also mentioned the difficulties in translating acronyms such as PDCA (Plan, Do, Check, Act). She explained how "It's next to impossible to find a Hungarian equivalent, for "do" and "act" are practically the same words in our language." She also had difficulties translating the SPIN process as she did not understand what it stood for until later on in the process. Concepts such as "added value," "cascading down," "coach," "thruster," and "wealth creation" were also very difficult to translate as there are no words in Hungarian that could convey their meaning. The translator was asking herself "what kind of wealth are we talking about - intellectual wealth, financial wealth?" The other translator also described how

> It was hard to find the equivalents for the U.K. trainers' flowing expressions, it was a challenge in itself. We had to convey the meanings of the expressions, idioms, metacommunication. Our profession – as I said before – is not only about conveying the concepts, but also about conveying the metacommunication. This makes the job even more difficult. There are a lot of gestures that have a different meaning in the other culture, and so on. It is literally "interpreting", or conveying the meaning in a different cultural environment. No wonder there is something of acting in our profession. That's what makes it interesting after all.

Another challenge faced by the interpreter/translator and mentioned by some participants was the understanding of the tonalities of voice, dialects and speed of presentation of different trainers. Lower pitches of voice as well as both very rapid or very slow presentations were difficult to understand and interpret. The interpreter/translator also proposed the use of at least two interpreters when there are several trainers taking turn in presenting. She found the trainers very helpful , nice and understanding , but explained how tired she was as she: "constantly had to adapt to the style, language, and the personality of the lecturer in turn. ... On the top of that, the workshop was held in the countryside (five-day one), so during the break interpretation was going on."

The interpreter and the translator of the materials did not have any communication either, thus there was a lack of consistency between how the concepts were translated in the handouts and how they were translated during the interpretation especially after they were clarified during the workshops. These concerns were brought up by the interpreters and were verified during the review of the translated materials and the observation of the workshops. The interpreter underlined the benefits of having materials translated by the interpreter or the close communication between translator and interpreter in avoiding inconsistencies.

The participants felt that although the trainers were quite familiar with using the business language tailored to civil service, the interpreter was not always so aware of the differences. Thus, some of the words such as "customer" were translated with a meaning fitting corporations and not public service organizations. Although the interpreters were well liked, the question of the benefits of using an external interpreter versus one from inside the organization was raised. The internal interpreter was in fact a translator who has never interpreted before. Although she had some reservations in performing this task she was asked and encouraged to accept it and she learned a lot by the third five-day workshop she had to interpret. Some of the participants liked that fact that she knew the organization, others felt that although she knew very well the professional language, she struggled with the business terminology used in the workshop. The UK team members' perception was that "the interpreter from the organization needed to be encouraged and found it a little difficult at times to deal with immediate and senior managers. Some of the hard messages we made were probably diluted in translation because the interpreter felt uncomfortable saying them."

The participants had only words of praise for the trainers' behavior and found it very helpful to work over a longer period of time with the same members of the UK team who got a chance to get to know more about the country, culture and organization. This was visible in the examples used by them over time – examples that became more culturally understandable and relevant to the work of the participants. They also underlined the benefits of using the same interpreters as they learn too a lot from each workshop to another.

Although one of the collaboration project objectives was for all the members of the management team to acquire skills in change management together with future managers and selected change agents, the participants felt that in order for change to happen in the way they work everybody should be trained in a short period of time. As one of the managers described:

> Now if they are training you to adopt a different working methodology, then everybody concerned should receive this training, to ensure good collaboration within the team. No matter how well I explain the way the job should be done, no matter how much I explain it to the next person, or use these new methods, this person (who didn't participate in the workshop) doesn't understand what I want, why I'm acting the way I do. ... I think this whole process can only be meaningful if everyone, from the managers to the last doorman, could receive this information in a relatively short period of time.

Lack of time to internalize and apply what was learned in the workshop, the amount of workload, lack of adequate workforce, people's mentality and resistance to change were mentioned several times as barriers towards implementing the concepts learned. One of the managers said: "If I had to sum it up I'd say that the training was not enough and there is absolutely no time for internalizing what you learn there, no time for self-directed learning. This should somehow be incorporated into the plan, if there is such a plan at all. Allow time for reviewing and self-directed learning."

One of the managers also talked about his need "to see the system behind the actions", to have a concise plan of the workshops and how they build on each other and also the need for the consistent implementation of the plan. He also talked about the Mission, Vision, Values booklet of the organization that was developed as a result of this collaboration by describing how "The ongoing nurturing of ideas or the communication with the outside world in the spirit of the booklet is over, gone, and that's the problem. It should be kept alive." The two UK team members acknowledged that a more active monitoring of action plans together with people being made accountable for their progress in implementing these action plans was needed. They said that "had they (action plans) been monitored and measured from the outset more may have been achieved. It may also have reinforced management commitment."

Although the collaboration had an easy start on the personal level being characterized by mutual respect, the challenges of the "practical" applications were also recognized by one of the Hungarian partners in this collaboration, a person who is given a lot of credit by participants for her promotion and continuous support for the project. She explained how "As for how we approach it, from the practical side, that was a completely different matter - it was more difficult given the fact that both they and us had to realize this was something new and unusual. ...we all had to convince the people here that the project was useful. This holds true even as we speak."

Conclusions and Recommendations

Several lessons learned by all the parties in this Hungarian – UK collaboration emerged from this preliminary analysis of the data. The following recommendations are based on these lessons. For successful implementation of change everybody should be trained in a relatively short period of time and mechanisms for keeping the new concepts alive and supporting change efforts have to be designed. A well thought out change management training plan in which the concepts presented build on each other has to be clearly communicated to all participants.

Communication across cultures through interpreters/translators requires very careful planning. Establishing a channel of communication between trainers/consultants and interpreters/translators is essential in clarifying misinterpreted concepts. The same should be established between interpreters and translators when the translation is not done by the interpreter. Ideally, translators/interpreters who are familiar with management & HRD terms should be contracted. As usually they are not familiar with management and HRD concepts, it would be ideal if they could participate in the workshop offered in the trainer's language prior to their assignments in order to understand the concepts and the process used by the trainers. It is also recommended that the same trainers/consultants with the same interpreters/translators to work with the client over the life of the project in order to understand the nuances of the cultures they are working in. The use of two interpreters is recommended for long workshops with multiple trainers. Materials that need translation should be sent in time in and handouts should be given in time for participants to be able to peruse them.

Trainers/consultants should be aware of the interpreters' difficulties in translating acronyms and they should clearly explain their meaning. They should also adapt an average pace of presentation and talk with the interpreters before training/consulting in order for the interpreter to get used to the tonalities of voice and dialects. When selecting examples, trainers/consultants should consult with members of the host culture for meaningful examples for the participants. Time and a process should be built in the training/consulting sessions to support participants' need for clarification of concepts. Funding agencies should be made aware of all these challenges when working across cultures and support for all of the above should be requested together with a plea for flexibility when working in continuously changing environments.

We believe that the lessons learned by all the parties involved in this collaboration will help set the base for best practice in similar situations and open new doors for researchers interested in further investigating the process of training/consulting across cultures. Further research is needed in uncovering the benefits of using internal or external interpreters, a "Prussian" versus an "Anglo-Saxon" change model and the implications of using English language speaking trainers and consultants communicating through interpreters versus native language speaking ones in bringing about change in organizations in non-English speaking countries.

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Theory of Intercultural Adjustment and Implication for HRD

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This paper examines theories of adjustment process and presents an integrated model through synthesizing previous literature. From this theoretical perspective, we develop a better understanding of intercultural adjustment, predict and facilitate adaptive success. Also, this paper answer about how HRD helps individuals adjust in the new environment in order to develop the necessary skills, abilities, and attitudes that are appropriate in a different cultures and to change host organizational cultures so that individuals cope with the new environment well

Key words: Intercultural Adjustment, Adjustment Process Model, And Intercultural Training

The difficulty of adjusting to life in a foreign culture has become a critical issue to organizations for the world is rapidly contracting. With improved means of communication and transportation, the amount of cross-cultural contact has increased dramatically, and many organizations have interest in the issue of employee adjustment within foreign cultures. Increasing evidence shows that inadequate adjustment to overseas assignments is costly, both to organizations and individuals, in terms of turnover, absenteeism, early return to the home country, and lower performance (Parker & McEvoy, 1993). Unfortunately, between 16 and 40 percent of all expatriates sent overseas return before complicating their assignment. The cost associated with the premature return of expatriates' ranges from $50,000 to 150,000 per failure, depending on the location of the overseas assignment (Black & Medenhall, 1990).

Therefore, to adapt effectively in a new culture, expatriates should have the required abilities and skills to communicate verbally and nonverbally, to take action, and to view problem solving as a social process involving consensus and interpersonal influence rather than only have a correct answer to succeed in a foreign country (Lobal, 1990). Companies could be much more helpful for their employees by building on employees' past experience, assisting in their preparation for the experience, and facilitating their success in their overseas assignment.

However, lack of systematic study of intercultural adjustment may have contributed to conflicting views by corporate leaders and academics about how they help expatriates facilitate adjustment in a new culture. Also, most empirical studies have tried to determine if certain factors are related to cultural adjustment rather than how expatriates adjust in a new culture or fail to adjust in the international assignment without theoretical map. The lack of systematic approach of cultural adjustment prevents to provide a richer view of adjustment process. It is important to provide theoretical guidance on the process of cultural adjustment. Theoretical review would be an appropriate step toward providing companies and academics with a completed and concise a treatment programs

This paper will attempt to answer the questions "what theories describe the process of intercultural adjustment, what factors are related to its process, and what is the appropriate model to understand better the goals of intercultural adjustment in organizations". To do so, this paper will examine theories explaining how individual adapt to the new environment and present an integrated model through synthesizing previous literature. The attempt for integrating a cohesive theoretical view of the multiple and interactive effects of adjustment would provide a holistic view, taking into account all of the levels of adjustment. From this theoretical perspective, we develop a better understanding of intercultural adjustment, predict and facilitate adaptive success.

In addition, this paper will try to answer about how HRD helps individuals adjust in the new environment in order to develop the necessary skills, abilities, and attitudes that are appropriate in a different cultures and to change host organizational cultures so that individuals cope with the new environment well

Theories of adjustment process

Adjustment and adaptation describe changes that occur when individuals have contact with different cultures. Both terms are not clearly differentiated and are often used with the same meaning but a brief review of these terms is

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worthwhile in understanding cross-cultural issues. Adjustment can be defined as a psychosocial well-being with emphasis on the process of achieving harmony and compromising with a new culture through changes in the individual's knowledge, attitudes, and emotions about his or her environment for the satisfaction and happiness as a human being. This relates to satisfaction, feeling more at home in one's new environment, improved performance, and increased interaction with host country persons (Hangman, 1990).

Adaptation deals with the same factors as the definition of adjustment. For some theorists, adjustment and adaptation overlap to a certain degree or are synonymous (Hannigan, 1990). Adaptation includes cognitive, behavioral, and psychological change in an individual in a new foreign culture. These changes result in the individual's movement from uncomfortableness to feeling at home in the new environment (Hannigan, 1990).

Theories of adjustment or adaptation process presented in this paper provide frameworks for understanding why and how various factors are important for successful intercultural adjustment and how individuals adjust in the new culture. Ideas about stages and characteristics of adjustment in different cultures have been taken from psychology.

U-Curve Theory

This approach is called a clinical, recuperation, or stress and coping model. It has been argued that life changes result in stress in that they produce disequilibrinm and require adaptive reactions (Ward, 1996). According to this perspective, adjustment involves the issue of how people manage conflict in new countries and how adequate their defenses are for coping with the result of the conflicts (Atwater, 1987). More specifically, this perspective pays attention to the role of personality, life-event changes, and loss of social supports that facilitate or inhibit the adjustment (Ward, 1996).

During the period of transition and adjustment, people experience some degree of anxiety, confusion, and disruption related to living in a new culture. This approach explains how to recover from culture shock and the mechanisms for accommodation to life in a new culture. Upon contact with a new culture, all the familiar underpinnings of one's sense of self are felt to be gone. People are deprived of most known reference points that under normal circumstances would provide cues for further behaviors as well as the substrata for their sense of identity (Anderson, 1994). People may well profit from learning ways of coping with both psychological and emotional stress, but they also need to know how to change inappropriate behaviors and increase cultural awareness (Befus, 1988).

Within a stress and coping framework, personality variables and social support may mediate adaptation to foreign milieu. Many studies (Baker & Ivancevich, 1971; Nguyen, Messe, & Stollak, 1999; Tung, 1982; Ward & Chang, 1997) have shown the importance of personality in the process of cross-cultural adjustment. Personality characteristics for successful adaptation include open mindedness, cultural empathy, creativity, a sense of humor, integrity, extraversion, and patience.

Social support also is important to individual expatriate success. Emotional and tangible support from family and friends is helpful for the expatriates to adjust in a new environment. In addition, when people undergo a similar experience, supervisors and co-workers can support and facilitate the expatriates' adaptation (Adelman, 1988).

Social learning theory

The social learning perspective views cross-cultural adjustment in light of the learning process and the interaction of individuals with their environment. Humans are seen as active organisms with tremendous capacity to learn, such as their problem-solving skills and their power of self-reinforcement (Atwater, 1987). This perspective focuses on both cognitive, internal events and external events (Allen, 1990). That is, social learning theory views adjustment as an interplay between the thought process and the social world. This perspective facilitates the learning needed for adjusting successfully in the host culture, and it also aids in the individual's understanding of, and ability to execute, appropriate behavior.

In cross-cultural adjustment, this perspective emphasizes the acquisition of culturally appropriate skills and behaviors through contact with the host culture and training (Searle & Ward, 1994). From this perspective, it is assumed that expatriates have to learn the parameters of the new sociocultural system and acquire the sociocultural skills necessary for participating in it (Anderson, 1994).

Parker and McEvoy (1993) also found that many previous experiences of contact with other cultures was linked to improved adjustment and the ability to meet the challenges of a new cultural environment. In addition to previous experiences facilitating adjustment. cross-cultural training affects expatriates' adjustment. Intercultural training powerfully affects the following variables (a) self-development (b) interpersonal skills with other workers. (c) cognitive skills: better understanding host social system and values. and (d) work performance (Ward. 1996).

Cultural distance has also been implicitly regarded as an important factor in adjustment to cultural change (Searle & Ward. 1990). It may be related to the ability to negotiate social encounters in a new culture. Individuals who are more culturally distant have fewer culturally appropriate skills for negotiating everyday situations (Furnham & Tresize. 1981). According to this concept. the greater the divergence between the culture of the host country compared to the home country. the more difficult the cross-cultural adjustment (Black. Mendenhall. & Oddou. 1991).

In addition. Anderson (1994) emphasized that cultural adjustment is a process of learning social skills. Communication skills are necessary for effective social interaction in order to overcome the verbal and nonverbal communication failures that are inevitable in different cultures.

Bandura (1977) introduced self-efficacy as one of the factors in the process of intercultural adjustment. Self-efficacy is the degree to which the individual believes that he or she can successfully execute a particular behavior. The sources for increasing self-efficacy include past experience. vicarious experience. and verbal persuasion (Black & Mendenhall. 1990). Another important factor is how closely the system of rewards and punishments is linked with the new desired behaviors. In summary. this theory argues that in order to adapt to a new culture. expatriates must learn both perceptual rules for interpreting their environment and behavioral rules for comporting themselves within it.

Cognitive theory

Cognitive theory suggests that. when someone is in a new culture. a defense mechanism be activated to hold his or her internal structure in balance. This defense mechanism is a form of protective psychological maneuvering (Kim. 1995). According to this perspective. cross-cultural adaptation is an attempt to avoid or reduce the internal imbalance experienced as tension. drive. need. uncertainty. self-deception. denial. and hostility (Anderson. 1994; Kim. 1995).

This equilibrium model construes cross-cultural adjustment as a dynamic and cyclical process of tension reduction. The basic premise is that systems operate in a steady-state mode until dynamic events. upheavals. or disruptions push them out of equilibrium. The process of cross-cultural adjustment is viewed in terms of the changing relationships between an individual's frame of reference. his or her behavior. and the ambient environment. These relationships all are evaluated using the individual's personal criterion of adequacy (Grove & Torbiorn. 1985).

The cognitive approach to dealing with cross-cultural adjustment includes the concept of schemata and emphasizes cognitive structures to organize information into meaningful content. A schema governs one's perception of the new life. Constructivists have suggested that the adaptive activities consist of two subroutines. Assimilation acts on the environment so that aspects of it may be incorporated into a person's internal structure. Accommodation responds to the environment by adjusting one's internal conditions to the corresponding external realities (Tennyson & Morrison. 1997).

New information in the host country can be incorporated more readily by making associations with established content. At the same time. the internal structure itself affects the new information (Tennyson & Morrison. 1997). In other words. if someone's internal structure is not ready. no new information will be incorporated. or new information could be distorted. It is necessary to modify the internal structure so that the retention of appropriate material can occur. Expatriates learn to deal with impending cross-cultural challenges and work to improve their functional relationship with the host environment

In summary. the process of cross-cultural adjustment in the cognitive perspective is viewed as the changing relationship between an individual's perception of reference (schemata) and the ambient environment. This theory emphasizes expectations. values. attitudes. and perceptions as critical factors influencing the cross-cultural adjustment process (Searle & Ward. 1990).

An Integrative Model of Intercultural Adjustment

Each of the above theories explains in part or describes a piece of the cross- cultural adjustment puzzle in an organizational setting. None of them fully accounts for the process of intercultural adjustment. That is. no theories provide a rich enough perspective to facilitate understanding such a complicated process. Also. they reveal little about the form or dynamics, in all their multiple dimensions, of the process. Therefore, an integrative model is needed to more understand fully the process of adjustment and to integrate the existing approaches into a more cohesive, comprehensive, and thus realistic, theoretical account of the phenomenon.

Systems theory may provide a view to understand the parts and the flow of adjustment of expatriates in a new culture. In addition, this perspective may provide a theoretical framework to integrate previous, separate approaches. Systems theory provides a big picture view of the intercultural adjustment process. Kim (1995) assumed that humans have an inherent drive to adapt and grow and that adjustment is a complex and dynamic process. He viewed adjustment as a fundamental life goal for people as they continually face challenges from their environment. Individuals keep refining and revising themselves throughout this internal complexity. Further, since the person and the environment participate together in the person's adaptation through continual interaction, adaptation is a phenomenon containing multiple dimensions and facets. A person's internal systems and the environment are engaged simultaneously and interactively, mutually influencing one another.

The cross cultural systems model based on systems theory engages in a conversion process. The system may include many subsystems, each with its own input-process- output cycles.

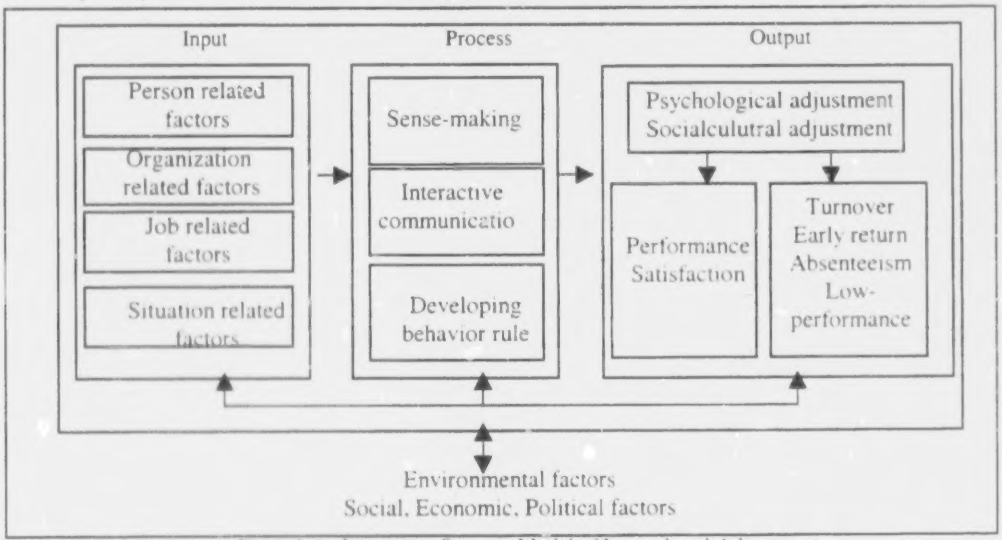
Input
Process
Output
Person related factors
Organization related factors
Job related factors
Situation related factors
Sense-making
Interactive communicatio
Developing behavior rule
Psychological adjustment
Socialculutral adjustment
Performance
Satisfaction
Turnover
Early return
Absenteeism
Low-performance
Environmental factors
Social, Economic, Political factors

Figure1 An Integrative Systems Model of Intercultural Adjustment

A variety of complex physical and informational inputs are converted to complex products, messages, and conditions. Many input factors may be required to produce many or few outputs. Inputs include materials, energy, and information converting to the output or being used to produce the outputs (MaLagan, 1988). In this model, inputs consist of person-related factors, organization-related factors, job-related factors, and situation factors. Process includes "the direct responses and actions that transform or reorganize inputs into outputs and that support the system's ability to convert inputs into outputs or produce outputs and achieve its purpose" (MaLagan, 1988, p. 71).

Outputs are what the system or subsystem or part delivers, produces, or provides as it works to accomplish its purpose (McLagan, 1988). Primary outputs in this model are divided into psychological adjustment and sociocultural adjustment. The secondary outputs in the organization are related to positive and negative performance. The environment could be "everything outside the system affecting or affected by the system's behaviors" (MaLagan, 1988, p. 72). In this model, environment includes economic condition of the organization, legal and political realities, social and cultural values, technical state, and competitive structure of the organization (Hall, 1993).

Input Factors Affecting Intercultural Adjustment

Okazaki-Luff (1991) suggested communication competence is a factor that is divided into interpersonal communication and language skill. Communication skills consist of empathy, respect, and flexibility of behavior, orientation to knowledge, interaction posture, interaction management, and tolerance for ambiguity. Gudykunst and

Hammer (1988) stated that intercultural adjustment reduces uncertainty or anxiety. It implies direct causal links among variables. Eight of the variables were found to be related to reducing both uncertainty and anxiety: knowledge of host culture; shared networks; intergroup attitudes; favorable contact; stereotypes; cultural identity; cultural similarity; and second language competence. Four variables were related to reducing uncertainty: intimacy; attraction; display of nonverbal affiliate expressiveness; and the use of appropriate uncertainty reduction strategies. The last four variables were associated only with reducing anxiety: the motivation of strangers to live permanently in the host culture; attitudes of host nationals; intergroup host culture policy toward strangers; and psychological differentiation of strangers.

The factors affecting intercultural adjustment from each perspective described above are listed in table 1.

Table 1
The Factors Affecting Cross-cultural Adjustment in each Theory

U-curved theory	Cognitive theory	Social learning theory
Personality	Perception	Self efficacy
Extroversion	Knowledge of host country	Cultural distance
Open-mindedness	Expectation	Expectation
Empathy, Flexibility	Work preparation	Motivation
Adaptation	Host language competence	Compensation/ benefits
Prior experience		Social support
Work Experience		Training
Social support		Communication skill

Black and Medenhall (1990) suggested a more comprehensive model of intercultural adjustment by integrating literature. In their model, the factors are divided into anticipatory adjustment factors and in-country adjustment factors. Anticipatory adjustment factors include individual factors and organizational factors. In-country adjustment consists of individual factors, job factors, organizational cultural factors, organizational socialization factors, and nonwork factors.

Using Black's model, Packer and McEvoy (1993) outlined the overall model of expatriate adjustment in organizations. According to them, the variables affecting adaptation are divided into three categories: (a) individual background variables: self-efficacy, perception and relation skills, prior international experience, work experience, personality, and motivation. (b) organizational variables: compensation/benefits, career practice, relocation assignment, work assignments, training, organization culture, and organization size (c) contextual variables: urban/rural location, family/spouse adaptation, and cultural novelty.

The proposed model synthesizes the previous literature accounting for the factors affecting cultural adaptation. It includes a multidimensional concept of intercultural adjustment. The input factors in the model include individual, organizational, job related and situational factors. Table 2 shows the input factors summarized from literature review.

Table 2
Input factors in the proposed model.

Individual-related factors	Organization-related factors	Job-related factors	Situation-related factors
Personality	Compensation/ benefits	Knowledge of work	Location
Gender	Training	Role clarity	Family/spouse adjustment
Age	Organizational culture	Role morality	Cultural distance
Self-efficacy	Selection	Work experience	Organizational socialization
Relation skill	Mechanisms/criteria	Technical ability	
Perception skills	Social support		
Motivation	Logical help		
Communication skills	Organization size		
Host language competence	Network		
Prior experience	Stereotypes		

Process of Intercultural Adjustment

Process explains how individuals cope with a new environment and how input factors are converted into outputs. As individuals face a new environment, they can adapt by changing the environment in the new situation to correspond more readily to their needs and interests, or they can adapt in a new culture by changing themselves (Dawis & Lofquist, 1984).

In sense making, the first unit in process, people recognize that adaptation is necessary and identify demands, constraints, and opportunities to adapt in a new environment. People accept information from the external world and subdivide it into the relevant and irrelevant to existing cognitive structure. This is true when the situation or information confused is perceived as similar to previous cognitive structure, people are likely to adapt it. If the information or situation is not relevant in a person's cognitive structure, he or she will have a difficult time accurately adapting to it. He or she tries to avoid or minimize the anticipated or actual pain of disequilibirum by defensive stress reactions (Kim, 1995). Successful completion of sense-making yields reduced uncertainty and emotional stress and increases general understanding of what is expected.

In interactive communication, people communicate with an internal cognitive structure and the external information or situation for desired change and make decisions about the personal acceptability of environmental requirements. When information or situation is irrelevant in their cognitive structure, people think and use rational means to understand the situation and to sort out confusion. In other words, when discrepancies occur between an individual's preferred mode of behavior and environmental demands personally acceptable, people attempt to communicate with internal and external demand for desired change (Ashford & Taylor, 1990). Davis and Loquist (1984) suggested that individuals could tolerate some level of discrepancy between cognitive structure or their environment before deciding to reduce it. They argue that when people face an extreme discrepancy, they confront a fundamental choice between changing environment and their cognitive structure.

If interactive communication between internal condition and external condition does not yield desired process changes in a new environment, individuals are likely to reassess the personal acceptability of these demands. If individuals are able to produce an acceptable set of demands, these become the standards used to regulate behaviors in the final stage of adaptation (Ashford & Taylor, 1990).

In developing behavior rules individuals adapt by translating their cognitive structure into behavioral rules desired to meet the demands of the environment, and the demands become behavioral habits and one loop of the adaptation process (Ashford & Taylor, 1990). The determined behavior pattern eventually is integrated and consolidated into stable and consistent ways of dealing with stressful situations (Sawrey & Telford, 1971).

Outcomes of Intercultural Adjustment

Gudykunst and Hammer (1988) developed a communication-based theory to explain intercultural adjustment. They assumed that the outcome of adjustment is "reduced cognitive uncertainty and affective anxiety". The result of adjustment enables the expatriates to manage psychological stress, to communicate effectively, and to establish interpersonal relationships.

Ashford and Taylor (1990) proposed that behavioral, cognitive and affective outcomes might come from process of adjustment. Individuals develop action-regulation strategies, cognitive facilities that enable them to adjust in the future, and attitudes that can cope with anxiety and control stress.

The proposed model specifies psychological adjustment and sociocultural adjustment as outcomes of intercultural adjustment. Ward and Chang (1997) reported that people achieve the psychological and sociocultural adjustment as the core results of adjustment in a different culture. According to them, psychology adjustment means psychological well-being or emotional satisfaction. Sociocultural adjustment relates to culture-specific skills, the ability to negotiate the host culture, or general intercultural competence. Psychological and sociocultural adjustment are inter-related, but they are largely predicted by different types of variables based on each perspective (Ward, 1996). The psychological adjustment is affected by personality, life changes, and social support. On the other hand, sociocultural adjustment is broadly influenced by factors such as cultural distance, amount of social contact with host nationals, previous cross-cultural experience, cross-cultural training, expected difficulty, length of residence in the country, and attitudes.

The outcomes of the psychological and sociocultural adjustment affects negative performance or positive performance. Whereas successful adaptation results in improved individuals' performance, organization commitment, and job satisfaction, unsatisfactory adaptation brings turnover, early return, absenteeism, and low performance.

Implication for HRD

The proposed model encourage a better conceptual understanding of the way people react to transition, and the design of practical interventions. HRD play an important role in employees' adaptation in an organization. To help its employees live successfully in a new culture, HRD should focus on developing the appropriate skills, abilities and attitudes and changing organizational culture. HRD activities should encourage individuals to feel comfortable and familiar with the new culture more easily and quickly.

Intercultural training

Gudykunt and Hummer (1988) suggest that intercultural training should focus on the purpose of adjustment to reduce uncertainty and anxiety in a new culture. Black & Mendenhall (1990) suggested three skills to be successful in a new culture. The first skill is related to the maintenance of self, such as mental health, psychological well-being, stress reduction, and feeling of self-confidence. Another skill is the fostering of relationships with host nationals through communication skills, interpersonal skills and social skills. A final skill is related to cognitive skills that promote a correct perception of the host environment and its social system. These skills provide realistic job expectations associated with greater satisfaction and lower job turnover. Cross-cultural training would also "allow the expatriates to make anticipatory determinations of what behaviors to act out". (Black, 1990 p.131). To develop these abilities and skills, cross-cultural training should take place during two phases of the assignment: predeparture and in-host country.

Predeparture training

Cross-cultural training is not likely to succeed unless one first has prior evidence of commitment to, acceptance of, capability to, and desire for change. Personal readiness to improve one's behaviors or skills is a necessary condition for change (Ruben, Askling, & Kealey, 1979). The cognitive, emotional, and motivational readiness to deal with the new cultural environment includes understanding of the host language and culture. Cross-cultural training would "allow the expatriates to make anticipatory determinations of what behaviors to act out" (Black, 1990, p.131).

To prepare expatriates' attitude for adjusting in a new culture, cultural awareness must be included in predeparture training programs. This training should consists of understanding how culture affects work relationships and how understanding these differences can promote teamwork and productivity within an organization (Hall, 1993). The expatriate's knowledge and understanding of the host country's culture is related to the success of the transfer.

It is also apparent that the spouse and family members need to be prepared for culture shock as they learn to adapt to the new culture. Training program help family members identify the particular needs of each individual and helps each family member develops strategies for successful overseas adjustment.

In-host country training.

In in-host country training, expatriates and their family are helped to makes sense of the new culture and handle specific incidents during their stay. Training should include ongoing language and communication skills, informational seminars on topics pertinent to the expatriate's responsibilities, host policy, marketing, political issues and so on. (Warren, Gorham, & Lamont, 1994). In addition, training needs a linkage to the strategic situation in the host country, as well as to the overall strategy of the company (Baumgarten, 1995).

Cultural adjustment training can help people manage cultural stress by observing the new culture, listening actively, asking appropriate questions to get clear understanding, and taking steps to adjust accordingly. By helping people understand cultural modes from a local national's perspective, training can lessen the degree of stress (Warren, Gorham, & Lamont, 1994).

Organizational intervention.

Expatriates may still find it to difficult to adjust in a new organization unless the host country organization's culture supports employees' adaptation. Organization development interventions can create an expectation of high standards of performance from everyone, stimulate personal development, encourage openness, and help worker feel valued. Intervention should be viewed as a short- and long- term process such intervention is important for the eventual task of improving performance.

Changing organization culture cannot occur without a change in the structure, policies, practices, and values of the organization. To help organizations change, leadership development, strategic planning, and team building interventions are required.

Conclusion

The first purpose of this paper was to provide a comprehensive review of the theories of intercultural adjustment process. These theories did not fully explain the dynamics of the adjustment process in all its multiple dimensions. The holistic view of the process of intercultural adjustment was required to better understand the process of adjustment involving learning, fulfillment, growth, and development (Anderson, 1994). Therefore, this paper developed the conceptual model integrated from prior research to capture some of the complexity associated with intercultural adjustment.

The proposed model provides systematic and comprehensive understanding of intercultural adjustment and guides future research. Future research would include careful and systematic empirical research on the theoretical model, including several aspects of the model and its components. The research identifies relationship among variables to enhance practice. For example, how and what people learn, how they decide on and communicate changes, how effectively they accomplish their tasks, and overall effectiveness of their adjustment. In addition how individual factors, organizational factors, job-related factors or situational factors has an impact on intercultural adjustment or performance or job satisfaction. Also, more focus is needed on effectiveness of intercultural intervention; that is, whether HRD interventions would lead to greater job satisfaction and higher performance? How those encourage or facilitate individuals' adjustment? If it would, what interventions are most effective in helping people adjust to a new cultural environment; and how can the programs help them accomplish their task and improve their abilities and skills?

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Exploring Alignment: A Comparative Case Study of Alignment in Two Organizations

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This study used questionnaire and case study methods to measure organizational alignment in two different organizations. The purpose of the study was to compare the results of an alignment measurement instrument with an expert qualitative assessment while gathering narrative examples describing strong and weak alignment. The paper describes the organizations' strong and weak points of alignment as reported by the instrument and by qualitative expert assessment and offers validation evidence for the measurement instrument.

Keywords: Organizational Alignment, Measurement & Instruments, Strategic HRD

Webster's dictionary defines alignment as "the proper positioning or state of adjustment of parts in relation to one another." This definition of alignment applies to organizations, too. In the organization, alignment is a measurement of how well the behavior of people and systems in the organization works together to support the goals and vision. It represents the essential agreement and cooperation between the organization's vision, strategy, culture, and systems. At its heart, alignment is how effective and efficient people are at moving their organization to where they want it to be.

As Peter Senge (1990) and others have demonstrated over the years, organizations are complex systems. Alignment is beneficial, to be sure, but very difficult to achieve. For an organization to have strong alignment, it must be aligned internally and externally. It must have put the internal systems into proper balance and tied the strategy and culture to the same vision. Each job, process, and system must reinforce each other. The practices and attention of the organization's culture must be focused on the things that will make it unified and successful. Any duplication or conflict between people, departments, or systems must be useful to the organization.

Anecdotes from business leaders, as well as related research, suggest that alignment is an important contributor to organizational performance, but not a guarantee (Labovitz & Rosansky, 1997). Alignment helps people know what to goals to pursue. It helps people accomplish their tasks efficiently. It engages their enthusiasm for their work. It provides smoothly operating systems and processes in which to work. Having all of these things in alignment leads to excellent performance. Keeping them in alignment is also important, and challenging. Over time, an organization must maintain and adjust alignment, both internally and externally, in order to survive in a changing marketplace. Fluid environments require rapid responses to opportunities and threats. In such an environment, strong but rigid alignment will only help an organization fail faster.

Organizational Alignment

The Semler Alignment Questionnaire (SAQ) was based upon a recently developed theory of alignment. Nadler and Tushman's initial work in the early 1980's provided the groundwork for alignment through the concept of *congruence*. In their article on diagnosing organizational performance (1989), they described the organization as a system of parts that must be properly balanced for best performance overall. Others have applied the concept in many other ways and places, including within the Malcolm Baldrige National Quality Award framework (NIST, 1994). While useful, most of these models have focused on only part of the whole picture of alignment. More recent work on alignment theory (Semler, 1997) provided a more comprehensive picture of how alignment affects performance and how it might be operationalized (Semler, 1999).

People within an organization have choices about how to allocate their time and attention. Alignment produces greater organizational performance by focusing this discretionary effort on the organization's vision. Alignment also helps optimize work systems and processes to make it easier to reach the organization's strategic goals (Semler, 1998; 1999). These two benefits of alignment give people in the organization the knowledge, the capability or skill, and the motivation to perform. They also give the organization's processes and systems the capability to focus

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people's energy on the right things. These effects of alignment account for both the systems and the cultural pieces needed to explain how alignment works and how leaders and HRD experts can use it to improve performance.

The nine components of the alignment model represent all major elements of the organization involved in the link between alignment and organizational performance (see Figure 1. the Alignment Model). Each element has a profound effect on the next element in line. The two are aligned when the downstream element is closely linked to the requirements of its upstream partner or partners. While each element has some sort of feedback loop and connection to the other elements, the overall direction of this ideal alignment flow is one-way through the diagram. An organization gets the best performance when all of the elements in the model follow the ideal flow. These elements are listed below:

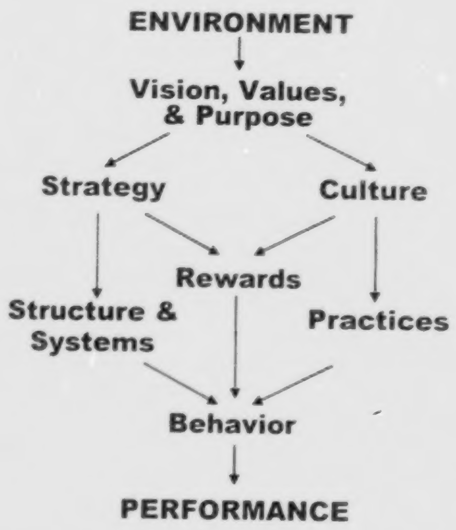

Figure 1. The Alignment Model. The model shows the-elements that make up the whole picture of alignment and the ideal flow of information through which each is aligned to produce performance

Environment describes the context within which the organization operates. It provides opportunities and constraints that influence the organization's freedom of action and definition of successful performance. This element includes information about competitors, customer needs and expectations, and the broader environmental context.

Vision, values, & purpose describes the object of alignment. Others refer to this as as the *main thing* (Labovitz and Rosansky, 1997), the *mission and vision* (Tosti and Jackson, 1994), the *vision* (Collins & Porras, 1996), the *strategic goal* (Kotter & Heskett, 1992), or the *strategy* (Nadler & Tushman, 1989). Whatever an organization chooses to call the object of its energies, it is the thing that calibrates the scale of alignment. It includes the permanent core values and purpose of the organization that make up its ideology. It also includes the long term visionary goal or aspiration that provides the direction to which all systems, structures, practices, rewards, and behavior should be aligned.

Strategy is the process of creating and communicating goals that are intended to place the organization in an advantageous position or configuration within its environment. Strategy properly includes vision, plans, and communication at all levels of the organization.

Culture refers to the set of assumptions within the organization about what brings success for individuals and the organization as a whole. These are shared, in greater or lesser part, by the majority of the members of the organization. The culture transmits the values, ideology, and assumptions to new members and maintains a sense of continuity over time.

Structure & Systems represent the observable artifacts of the organization that move or transform resources (information, matter, and energy) to produce desired outputs. This element includes organizational structure, the design of business processes, and the design of information and learning processes.

Rewards comprise the process for attending to and incenting organizational behavior. The variable includes formal and informal mechanisms such as pay and benefits scales, incentive programs, promotion and disciplinary systems, feedback, assignment choices, and interpersonal attention.

Practices represent the assumptions and priorities of the culture in action. The practices of the organization are habitual patterns of attention and action–the way the culture is enacted on a day to day basis.

Behavior is the observable activity of people within the organizational system. Any given behavior is directed toward one or more goals of the individual, which may or may not contribute or be intended to contribute to achievement of the strategic goals.

Performance is the collective output of individual and group behavior in the organization as facilitated by the capability of organizational systems.

The alignment model shows the ideal flow from one element of the organization to the next. The environment shapes the organization's vision, values, and purpose. Vision, values, and purpose drive strategy and culture. Strategy drives systems and structure and rewards. Culture drives rewards and practices. Systems and structure, rewards, and practices drive behavior. Finally, the collective behavior becomes organizational performance.

Each arrow between elements of the model also represents a different set of alignment indicators that people can observe. For example, between *environment* and *strategy*, one specific indicator might be the degree to which the organization includes specific information about its customers in its strategic goals. There are many different behaviors that could indicate alignment or misalignment between each pair of elements. These behaviors were the basis for the SAQ items.

Statement of the Problem

Part of the difficulty of working with organizational alignment is that there has been no easy way to measure it. The best and most reliable way to measure alignment has been to use a carefully trained and prepared team of external assessors to examine the organization's processes, systems, and work artifacts (NIST, 1994). This method, used in the Malcolm Baldrige National Quality Award process, consumes more than 3,200 person-hours of work and requires a high level of expertise that may not be available or economical to the organization. I developed a survey-based measurement instrument as part of my work with organizational alignment theory. This study sought evidence of how well the results reported by this new instrument would compare to those of a qualitative expert assessment, albeit one less rigorous than the Baldrige Quality Award process. The findings of the research would also offer some evidence upon which to evaluate the construct validity of the underlying alignment theory.

The research questions include the following: To what extent do the Semler Alignment Questionnaire (SAQ) results correspond with experts' qualitative assessments of alignment? How well can the SAQ items and instructions identify strengths and weaknesses of alignment in different kinds of organizations? Additionally, an understanding of strong and weak states of alignment in the different theoretical dimensions could improve our understanding of alignment. What do these strengths and weaknesses look like; how might we describe them?

Method

The study administered the SAQ to two organizations and made a qualitative comparison of the questionnaire results with expert judgments of alignment for the same organizations, using the same theoretical basis. Obtaining validation evidence for the Questionnaire was the principal interest of the study. The researcher employed expert judgment as a triangulation technique and a way to obtain narrative examples of conditions that would provide confirming or refuting evidence of the SAQ's ability to accurately measure alignment in organizations.

Subject organizations were selected for convenience and diversity of industry. The researcher had previously established a relationship with internal human resource development (HRD) experts in each organization and offered them the opportunity to participate in the study. Four organizations were originally invited to participate. Two were able to complete the study in time for publication of this paper. The others were still in the research process at press time. The study included an international human resources consulting firm, a government services organization in the United Kingdom, a secure data processing services company, and an industrial controls manufacturing firm. For this paper, the consulting firm is referred to as Organization 1. The government services organization is Organization 2.

The researcher and the internal HRD expert initially invited twenty-five respondents from a pool of managers, cross-functional team leaders, and human resource professionals to complete the SAQ. People in these positions were deemed most likely to have sufficient knowledge of both organizational strategy and front line work practices to complete the questionnaire. Employees at lower levels in the organization could probably provide more diagnostic data about alignment, but could not reasonably be expected to have knowledge about the organizational strategy that would allow them to be able to complete the SAQ in its current form. The Questionnaire included items such as those in Table 1.

Respondents were selected using three principles: (1) strive for a group that accurately represents the organization, (2) invite those who are most likely to be able to provide accurate information to respond, and (3) select at random to the greatest extent possible. Consultation with a statistics expert and experience with similar multi-rater instruments suggested that representativeness of the sample, and not any particular number of responses, was key to obtaining valid response data.

Table 1 – Sample SAQ Items by Dimension

Strategic Alignment

1. My organization clearly addresses competitive threats and opportunities in its strategic goals.
4. My organization clearly links its strategic goals to specific customer needs or expectations.
8. My organization creates divisional and departmental goals to adapt to changes in the business environment.

Vision, Values, and Purpose Alignment

11. My organization clearly links its strategic goals to our long-term vision of where we want to be in the future.
14. My organization clearly communicates its strategic goals to everyone in the organization.
17. My organization develops plans that encourage people to put the organization's core values into action.

Reward Systems Alignment - Strategic Focus

21. My organization clearly links routine performance measures to its strategic goals.
23. My organization gives informal rewards and recognition (for example, praise, special opportunities, positive feedback, choice of assignments) to people who make important contributions to our strategic goals.
24. My organization uses a clear and consistent system of rewards and consequences that encourages people to work at their best.

Structure & Systems Alignment

28. My organization uses key business processes that clearly support our strategic goals.
31. My organization uses an organizational structure that allows coordination across unit boundaries, when necessary to achieve strategic goals.
32. My organization clearly communicates how each job and work process contributes to our strategic goals.

Reward Systems Alignment - Cultural Focus

35. My organization promotes and compensates people fairly and consistently.
36. My organization gives choices of work assignments or projects fairly and consistently.
39. My organization recognizes when people do a good job.

Organizational Practices Alignment

42. My organization's leaders do what they say they will do.
43. My organization's leaders have excellent credibility.
45. My organization's way of getting things done is efficient.

After distributing the questionnaires to the respondent pool, the researcher or his internal HRD partner identified three or four internal business experts from each organization. These experts were senior executives and HRD consultants who were recognized as experts on their organization's strategy and operations. The researcher or his HRD partner then interviewed these experts. In each session, the interviewer explained the alignment model and asked the experts to describe their organizations' systems and practices in each of the dimensions of alignment, independently covering the same topics as the SAQ. The researcher encouraged the experts to rate their organizations in each dimension as strong, weak, or mixed and to critically examine their organizations' strategy, culture, systems, rewards, and practices from the perspective of the alignment model.

The researcher then presented and helped the experts interpret their organizations' SAQ results. After the experts felt they understood the results, the researcher asked them to share their reactions and comments on the accuracy of the feedback. In addition to capturing these summarized comments, the experts also rated the accuracy of the questionnaire results for each item with a survey (Lawshe, 1975; Pucel, Cerrito, & Noe, 1989).

Results

In content validation work with the Semler Alignment Questionnaire, all items on the Questionnaire were rated as essential or helpful by eight out of nine expert reviewers, producing a content validity index (CVI) of .78 or higher for each item and dimension. This satisfies the t-test recommended by Lawshe (1975) at the .05 level.

The characteristics of those who completed the SAQ and those who did not were similar in most respects. The researcher and HRD partner judged the final samples to be adequately representative for both organizations (Org. 1 n=11; Org. 2 n=16). One flaw in the sample was that only US-based employees responded to the SAQ in Organization 1, where international employees from that organization were also invited to respond.

Item ratings for the SAQ were on a five point scale ("1=we do not do this at all" to "5=we do this to a very great extent"). Items were rated individually by each respondent, with means and standard deviations reported. Accuracy ratings supplied by internal experts were on a four point scale ("1=not at all accurate" to "4=very accurate"). Each expert evaluated the accuracy of the respondents' mean ratings for each item. These ratings appear at the dimension level in Table 2.

Table 2 – SAQ Ratings and Expert-Reported Accuracy

	Organization 1			Organization 2		
Alignment Dimension	**Mean**	**SD**	**Accuracy**	**Mean**	**SD**	**Accuracy**
Strategic Alignment	3.03	1.09	3.22	2.93	0.80	2.58
Vision, Values, and Purpose Alignment	2.98	1.00	3.36	2.99	0.83	2.77
Reward Systems Alignment - Strategic Focus	2.61	0.83	3.50	2.33	0.80	3.42
Structure & Systems Alignment	2.66	0.81	3.43	2.86	0.82	3.07
Reward Systems Alignment - Cultural Focus	3.11	0.87	3.43	2.62	0.72	3.00
Organizational Practices Alignment	2.80	0.91	3.75	2.56	0.70	3.28

The SAQ respondents independently identified the same strengths and weaknesses of alignment that the internal experts did. The internal experts reported in the interviews that the results of the questionnaire were at least fairly accurate. The experts of Organization 1 reported higher accuracy, finding no surprises at all from the SAQ results. Internal experts from Organization 2 expressed more disagreement with the specific SAQ ratings, but agreed with the same areas of strength and weakness as did the questionnaire respondents. The specific accuracy ratings varied by organization and dimension, and the experts suggested that some of the people who responded to the Questionnaire may have different perspectives and amounts of knowledge about the strategy of the organization and operating unit, thus affecting their ability to respond to questions. Table 3 presents the experts' assessments of strengths and weaknesses by dimension with the corresponding SAQ means.

Table 3 – Comparison of Experts' Assessments with SAQ Results

	Organization 1		Organization 2	
Alignment Dimension	**Expert Assessment**	**SAQ Means**	**Expert Assessment**	**SAQ Means**
Strategic Alignment	+	3.03	+	2.93
Vision, Values, Purpose Alignment	0	2.98	+	2.99
Reward Systems Alignment - Strategic	–	2.61	–	2.33
Structure & Systems Alignment	–	2.66	0	2.86
Reward Systems Alignment - Cultural	+	3.11	–	2.62
Organizational Practices Alignment	0	2.80	0	2.56

Legend:
+ Experts report stronger alignment.
– Experts report misalignment or weaker alignment.
0 Experts describe mixed or neutral alignment.

Means and standard deviations were reported by questionnaire item in the SAQ report. The results were presented first by dimension, with the Top 10 and Bottom 10 rated items and themes following. Generally, the lower an item was rated by SAQ respondents, the lower the standard deviation reported. This effect held across both organizational samples under an analysis of variance by quartile (F=3.92, *p*=.011). This effect has even greater significance when analyzed by Top 10, Middle 28, and Bottom 10 items, as opposed to quartiles (F=8.06, *p*=.0006).

Narrative Examples

These are some general examples of strong and weak alignment practics and characteristics in each alignment dimension, as related by the organizations' internal experts.

Strategic Alignment – Dimension 1. This dimension was described to study participants as "*Linking vision and strategy with the business environment.*" Both organizations described a strength of alignment as understanding the customer, and communicating with the customer about current and future needs. However, having customer information did not necessarily equate with the ability to act on that information. Organization 1, a pioneer in several technologies, had long recognized the potential for customers to switch to lower cost suppliers, but missed several opportunities to address this competitive threat. Organization 2 identified customer consultation practices (roadshows and user groups, for example) as effective ways to align new and existing product groups with customer needs and expectations.

Vision, Values, & Purpose Alignment – Dimension 2. This dimension was described to study participants as *"Setting strategy to live the values and achieve the organization's vision and purpose."* Organization 1 reported that it had been following a strategy for years that it could not articulate or explain. This organization had, however, been able to deploy its strategy through its values and culture. Its experts attributed a number of missed competitive opportunities to their difficulty in articulating the strategy. They also acknowledged that the strategy enhanced innovation, but did not provide a clear, common vision or direction. Organization 2 reported that it had strengths in planning and linking plans to strategy and core values. This organization also emphasized "cascading" organizational goals down to individual employee objectives. Despite this practice, the experts interviewed felt that lower grades often "miss" the link between goals and strategy.

Rewards Alignment–Strategic Focus – Dimension 3. This dimension was described to study participants as *"Maintaining reward systems and consequences that support the strategy."* Both organizations cited this dimension as a weak area. Both lacked clear or "transparent" systems that were consistently applied or explained to employees, and experienced employee dissatisfaction as a result. Organization 1 experts stated that the organization had almost certainly lost talent as a result of inconsistent perceptions of fairness. Neither organization had measurement systems in place to link indicators of strategic performance with individual or team performance and rewards. Organization 2 cited extra work given to top performers as "a disincentive to go the extra mile." Both organizations also reported that they had few consequences for poor performance, and seldom took consistent action to address performance problems.

Structure & Systems Alignment – Dimension 4. This dimension was described to study participants as *"Linking the organization's structure and systems with strategic goals."* Organization 1 experts acknowledged the opportunity to get more systematic about strategy and key business systems. They cited the need for key business processes to operate smoothly in the background as an improvement issue for their organization. They recognized that the chief executive's personal leadership was not enough to provide direction for the entire organization like it once was. "It's harder to steer a bigger boat. We can't just make lots of flexible course corrections to respond to opportunities. We have to plan our opportunities farther in advance." Organization 2 reported that it was "breaking out of silo working" and moving toward more matrix management to address cross-boundary needs. These experts cited the flexibility of team-based working as a potential remedy to the legacy of their hierarchical structure.

Rewards Alignment–Cultural Focus – Dimension 5. This dimension was described to study participants as *"Guiding people's efforts with appropriate rewards and encouragement."* Both organizations cited the ability to get people into jobs they enjoy as an effective practice. Organization 1 noted its strong culture of informal rewards and recognition based upon performance as a strength. This organization rewards loyalty and dedicated service with informal praise, recognition, and challenging work assignments. The informal nature of the rewards leads to unreliable perceptions of fairness, however. The experts interviewed saw the team-based incentives of their organization as an excellent practice, with the expectations and rewards both transparent and motivating. Organization 2 had more of a traditional reward culture, with limited reward or recognition opportunities. These experts noted that there were few team-based rewards, little public recognition, and not enough private "thank you's." They also felt that there was not enough financial reward for those who valued pecuniary incentives.

Organizational Practices Alignment – Dimension 6. This dimension was described to study participants as *"Walking the Talk - following through with action on what leaders say is important."* This dimension covers two different concepts, key leaders' actions and effective work practices, and this dichotomy appeared in both the SAQ results and the interviews. Organization 1 experts rated the availability, consistency, and openness of leaders as a strength. They felt that there was much room for improvement in the efficiency and effectiveness of the organizational practices and priorities. This was an area of some discrepancy between SAQ respondents and experts in Organization 2. The internal experts rated leader credibility much higher than the SAQ sample did, giving more credit to executive leadership for "improving—more walking the talk" than the respondents in the field. Despite this extra credit, they acknowledged the lack of consistency of leaders. While "there are some pockets of good practice," leaders they often "talk a good game, but rarely deliver when under pressure." They also recognized that leaders have less credibility than employees want and expect.

Discussion

The results offer ample initial evidence for face validity, content validity, and inter-method reliability of the Semler Alignment Questionnaire. The data also provide some confirming evidence for the construct validity of the theory upon which the SAQ is based.

Agreement of the SAQ and Internal Experts

In the instrument development process, the senior HRD practitioners and researchers that formed the expert review panel gave high face and content validity ratings to the SAQ. The internal experts in this study verified the face validity of the questionnaire and its results.

The degree of agreement between the qualitative assessment of alignment provided by the internal experts and the quantitative results of the SAQ is very satisfactory. The SAQ was able to match the experts' rank ordering of dimensions, and was also able to accurately point out the specific strengths and weaknesses identified by the experts' narrative examples.

The researcher's initial benchmark for the accuracy ratings was set at 2.50 or higher (the mean) on a four point scale. This would reflect a score between 2 ("somewhat accurate") and 3 ("mostly accurate"). The experts in both organizations rated the mean accuracy of all six alignment dimension results at 2.5 or higher and rated all but six individual items at 2.5 or higher. This is a very satisfactory result for an initial test of a new theory-based measurement instrument.

The SAQ performed similarly in two different organizations, one a profit-driven high-technology firm, and the other a public sector government services provider. While these results are far too small to suggest generalizability (to say nothing of repeatability), they offer initial encouragement.

Pattern of Variance

The decreasing variance in the SAQ ratings between the Top 10 and Bottom 10 items is interesting. As reported for the ANOVA results, the standard deviations of SAQ scores were significantly lower for the Bottom 10 than for the Top 10. This suggests greater agreement on items of misalignment (the Bottom 10) than on items of strong alignment (the Top 10). This finding offers support for the practical observation that it is easier to agree on which things are out of alignment than on which things are strongly aligned. This may be because difficulties and barriers come more easily to mind than things which one has little cause to notice; an example of the availability heuristic in action.

SAQ Issues

The definitions of "leaders," "organization," and "environment" prompted questions from some SAQ respondents. Some respondents viewed their immediate superiors as leaders, others saw only the executive group as leaders. Similarly, they reported some confusion about whether "organization" was intended to mean their site or the whole enterprise. As expected, some respondents asked questions or reported difficulty when asked to rate the entire organization, commenting that they did not know enough about the rest of the organization outside of their particular unit, department, or site. The use of the generic term "environment" may be too vague for some respondents, allowing people to take different views of the scope of the organization's operating environment. This is especially true for respondents in the public sector organization, who had difficulty responding to questions about the competition or competitive threats. No other difficulties with the terminology or language of the SAQ were reported.

The method used to obtain responses to the SAQ has certain strengths and weaknesses. The sample selection method relied upon the judgment of a researcher and HRD partner, and was not a statistically random sample. This forces us to use caution when applying statistical methods to analyze the data. When used for diagnostic purposes, however, this limitation is not as important as the need to solicit a balanced, representative set of respondents who can provide multiple perspectives of alignment.

Summary

The initial implication of this study is that HRD practitioners have a practical diagnostic tool to assess strong and weak areas of organizational alignment. While the SAQ is far from perfect, it offers the first theory-based method of measuring alignment in a survey instrument. Further studies and use in the field should provide additional evidence of the SAQ's capabilities and limitations.

The finding that there is greater agreement on lower rated items than higher rated items may offer tips for practice. If this finding applies to other organizations, the recommended HRD practice of assessing needs by "looking for the pain" may be more accurate and practical than studying both strengths and weaknesses where resources are limited.

Any measurement instrument can only provide a single slice of data about organizational behavior and performance. A complete assessment is obtained by combining several different perspectives, including instruments, observation, and involvement of the stakeholders. The best use of an instrument is to prompt a discussion of the results. When the participants have confidence in the instrument, such discussions can focus on the meanings of the results and their implications for the organization. This dialogue is where the HRD practitioner can add the most value, and can use the SAQ results as a jumping off point for a thorough assessment of the organization's performance needs. This dialogue is also the best place to begin prioritizing issues and searching for solutions. In this way, the SAQ can provide another diagnostic tool for the HRD practitioner to lead performance improvement work for the organization.

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Vertical Integration of HRD Policy within Companies

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This study concerns HRD policymaking in companies. More specifically it explores whether so-called vertical integration of HRD policy at different organizational levels occurs within companies. Findings indicate a virtual absence of HRD policymaking or strategic HRD aligning, in all aspects and levels within the companies studied. It is thus problematical to harmonize HRD policy processes in a vertical direction.

Keywords: HRD Policy, Policy Integration, Policy Harmonization

The survey reported here is part of the Strategic Human Resource Development (HRD) project in which the effects of strategic HRD are studied within companies. Strategic HRD refers to the planned learning and development of individual and groups of employees for the benefit of the company as well as themselves (e.g. Garavan, Costine and Heraty, 1995). Central to this is that HRD programs have to be aligned to the company concerned. HRD policymaking is the process in which strategic choices are made concerning these targeted programs and other learning activites. It is an interactive process whereby as part of ongoing and future company policy, appropriate HRD goals and objectives are formulated regarding employees' and company development (Wognum, 1999). Theoretically, optimal HRD policymaking should take place at strategic, tactical, and operational levels within organizations, with relevant stakeholders involved at every level. Theories based on the systems approach often plead for a harmonization of HRD policy at various levels of the organization (Gilbert, 1978; Van de Ven & Drazin, 1985; Banathy, 1991; Romiszowski, 1984; Rummler & Brache, 1990; Swanson, 1994). When this does not happen, it is highly likely that HRD programs will be ineffective. It is therefore interesting to explore whether vertical integration of HRD policy at different organizational levels actually occurs within companies.

Theoretical Framework

Organizational problems and development and their related training needs may occur at the strategic, tactical and operational levels of the organization (Figure 1). Optimal HRD policymaking (Figure 1),should take place at these three levels (Rothwell & Kazenas, 1989) in order to align HRD programs strategically to the company concerned. HRD policymaking, therefore, includes information gathering and identification of potential HRD needs at each company level in cooperation with the relevant stakeholders. These needs relate to performance levels and business results stakeholders are striving towards. HRD policymaking at the *strategic level*, with a company's top management as primary stakeholder, includes analyzing corporate mission, strategy, problems, developments and other issues which, at this level, may serve as starting point for HRD processes. HRD policymaking at the *tactical* level, with middle managers as primary stakeholders, includes analyzing problems and development around the coordination and cooperation between organizational departments which may call for HRD interventions. HRD policymaking at operational level, with lower executive management and other employees in the operating core as primary stakeholders, includes identifying performance problems of individual workers and operational departments (Tjepkema & Wognum, 1999). HRD policymaking at these three levels is thus an interactive process whereby as part of an ongoing and future company policy, appropriate HRD goals and objectives are formulated concerning targeted programs and other learning activites so that employees acquire the competencies necessary to improve performance and organizational effectiveness.(Torraco, 1995).

The HRD function, which is usually in the form of an HRD department, also comprises three levels: HRD policymaking at strategic level; HRD administration at tactical level; and HRD implementation at operational level (Figure 1). HRD policymaking is already described in the above section. HRD administration concerns the process of creating favorable conditions for implementing the stated goals and objectives. It includes the allocation of HRD staff, budgets and other resources. HRD implementation concerns the effective implementation of learning processes

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and includes decisions on specific HRD activities like selecting employees to be trained or educated, time schedules and other detailed arrangements.

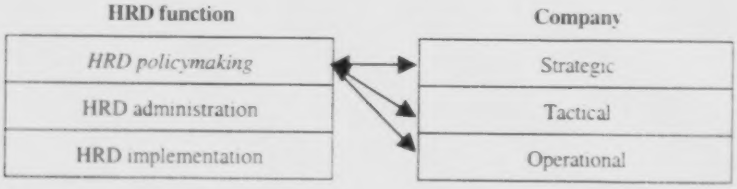

Figure *1: Levels in HRD policymaking*

Strategic Partnership and Vertical Integration

By means of the lines between HRD policymaking and the three company levels (see Figure 1) it is envisaged that optimal HRD policymaking takes place at strategic, tactical, and operational levels within the organization. Cooperation between allthose involved - top, middle and lower executive management, employees in the operating core, and HRD company representatives - is necessary in order to arrive at strategically aligned HRD programs and other learning interventions. This so-called 'strategic partnership' (Kaufman, 1986; Robinson & Robinson, 1989) leads to more commitment, and a positive attitude of stakeholders towards training and development.

Though often worded in different ways, virtually all systems theorists opt for mutual tuning and harmonization between decisionmaking at strategic, tactical and operational levels (Gilbert, 1978; Van de Ven & Drazin, 1985; Banathy, 1991; Romiszowski, 1984; Rummler & Brache, 1990; Swanson, 1994). Decisionmaking at strategic level has to be translated into tactical and operational levels (and vice versa) in order to achieve an integrated and coherent HRD company policy. Because of the more or less hierarchical levels, this harmonization between strategic, tactical and operational policy processes is called 'vertical integration of HRD policy'. When this integration does not take place, it is highly likely that HRD programs will be ineffective (cf. Van de Ven & Drazin, 1985). Earlier empirical reserach has established that a true integration of policy processes at these levels is extremely limited within companies (Mulder, Akkerman & Bentvelsen, 1989; Wognum, 1998). It is therefore interesting to explore further whether this so-called vertical integration of HRD policy at different organizational levels occurs within companies.

HRD Policymaking and Strategic HRD Aligning

In policymaking practices all kinds of accidental and unplanned working procedures take place, which also determine the way policymaking processes occur (Mintzberg, 1994). In order to study the vertical integration of HRD policy processes in companies, this study therefore departs from the actual performed HRD policymaking processes, identified by the term 'strategic HRD aligning'. The word 'strategic' emphasizes the company perspective and connects the link between HRD and organizational goals and objectives. Strategic aligning thus concerns the development of HRD goals and objectives and HRD interventions which are aligned with company strategy, problems, and developments at all company levels. The aligning process consists of three stages: 1. Identifying organizational strategies, problems and developments at all company levels; 2. Examining these in relation to possible HRD implications; 3. Making strategic choices about the way in which strategies, problems and developments can be supported by HRD programs and other learning activities. Based on the foregoing and also on features of decisionmaking models (Koopman & Pool, 1992; Van Heffen, 1993), strategic HRD aligning is characterized by four aspects: participation, information, formalization, and decisionmaking. *Participation* means the involvement of participants, the so-called HRD stakeholders, at various company levels in the aligning process. *Information* refers to the data needed to gain more insight into the problem and related HRD needs. Data from various organizational levels are needed to decide which HRD goals and objectives are important in order to align HRD programs to the company. *Formalization* refers to the formal consultative structure and information gathering procedures of the aligning process. *Decision-making* is about making choices regarding the supporting of problems and developments in the company by HRD programs and other learning interventions. It is concerned with determining the appropriate HRD goals and objectives at various organizational levels, target groups and content of HRD programs and other learning interventions.

Research Question

In this study an important question is whether optimal HRD policymaking at strategic, tactical, and operational level of an organization has taken place. The study focuses specifically on the harmonization of HRD policy at these company levels - the so-called vertical integration of HRD policy. The main research question is then: *to what extent will vertical integration of HRD policy in companies occur?* Because this study departs from actual performed HRD policymaking processes, the main focus is on the vertical integration of strategic HRD aligning.

Methods

The survey reported here was carried out as part of a larger one among Dutch companies. Large companies (more than 500 employees) from the industrial sector and the financial and commercial services sector were selected from a national database from the Association of Chambers of Commerce. Research has shown that in absolute terms the greatest effort in HRD programmes is made in companies of this size and within these specific sectors (Mulder, Akkerman & Bentvelsen, 1989). The present study started from a group of 44 companies already studied earlier in the main research project (Wognum, 1999). A non-response analysis showed no significant differences between the non-response group and the 44 companies in the study concerning certain contextual variables such as size and structure of the company and structure and position of the HRD function.

Sample. In order to answer the research question, a survey was carried out among 44 Dutch companies with more then 500 employees in two economic sectors (11 from the industrial sector and 33 from the financial and commercial services sector). In each of these organizations one HRD program was selected from two frequently recurring areas of HRD activities, namely automation and social skills. These areas were selected for two reasons. Firstly, both types of HRD program were offered in the 44 companies. Secondly, earlier research findings indicate some differences in the level of contentment of employees with the aligning procedures. In companies where social skills programs were offered respondents were more discontented about the aligning procedure than in companies that did not give this kind of training. No significant differences were found in the case of automation programs (Wognum, 1998). The selection process resulted in 23 automation and 21 social skills programs. Four categories of respondents were selected: the HRD company representative, a maximum of 15 HRD participants in the selected programs, their supervising manager and (if present) their subordinates. All groups can be considered as having an interest in HRD policymaking in companies (the so-called groups of stakeholders).

Data collection. Data were collected in the spring and summer of 1997 using a questionnaire sent to 767 representatives of the four groups of stakeholders (44 HRD company representatives, 357 HRD participants, 242 of their supervising managers and 124 of their subordinates). The questionnaire was designed to collect information on the aforementioned process of strategic HRD aligning, and comprised mainly precoded questions with some open answers intended for additionel comments. Questions concerned respondents' participation in the aligning process, information they had provided (ten categories were identified, including company's strategy and performance results, operating procedures of the unit or department the respondents worked for, and respondents' knowledge, skills and attitudes), the consultative structures and information gathering procedures applied (including formal as well as informal meetings, projects, and evaluation procedures), and the kind and level of determined HRD goals and objectives (including respondents' knowledge, skills, attitudes, working behavior, and performance results at the operational level, the performance results of their unit or department at tactical level, and the performance results of the entire company at strategic level).

Response. 752 questionnaires were sent to the automation group (23 HRD company representatives, 320 trainees, 277 managers, and 132 subordinates). All 23 HRD company representatives completed the questionnaire, while 54% of trainees, 43% of managers, and 29% of subordinates responded. 740 questionnaires were sent to the 'social skills' group (21 HRD company representatives, 292 trainees, 251 managers, and 176 subordinates). All HRD representatives completed the questionnaire, while 63% of trainees, 49% of managers, 49% of subordinates responded. The final group of respondents in this study had a sample size of 44 HRD company representatives, 357 HRD participants, 242 supervising managers and 124 subordinates.

Analysis. The two-staged sampling design used (first a sample of companies, then a sample of respondents within each company) resulted in a hierarchical, nested data structure. To arrive at answers to the research question, therefore, not only descriptive statistics but also multilevel analysis was used. Multilevel statistical models (cf.

Goldstein, Rasbach, Plewis, et all, 1998) are suitable for handling data with such a hierarchical structure. These models allowed us to make statistical inferences both at individual respondent (sample size 767) and company size (sample size 44) levels. It shouls also be noticed that multilevel analysis includes the estimation of expected means.

Results

Strategic aligning concerns the development of HRD goals and objectives and HRD interventions, which are aligned with company strategy, problems, and developments at all company levels. As was described before, it represents the actual performed HRD policymaking process within the companies studied, and is characterized by four aspects: participation, information, formalization and decision-making.

Participation

From the data in Tabel 2 it may be concluded that the four groups of respondents were involved, on average, in less than one of two stages of the aligning process. The first stage of identifying organizational strategies, problems and developments at all company levels was not involved in the analysis since this was not required of three of the four respondent groups. Supervising managers were the most involved participants (M=.99), while subordinates were the least involved (M=.26). Three groups of respondents, however, attached great interest to their participation in aligning processes (HRD representatives were not questioned in this perspective). The mean score of HRD participants on a five-point scale is 3.87 (SD=.86), supervising managers 4.01 (SD=.69), and subordinates 3.59 (SD=.93) (Table 1).

Table 1: *Means and standard deviations per group of respondents concerning the importance attached to participation and the providing of information in strategic HRD aligning*

	P[a]		M[b]		S[c]	
	M	SD	M	SD	M	SD
importance of participartion[d]	3.87	.86	4.01	.69	3.59	.93
importance of provinding information[d]	3.84	.86	4.03	.72	3.63	.92

a) P: Participant of HRD programs (N=357)
b) M: Supervising manager of HRD participant (N=242)
c) S: Subordinate of HRD participant (N=124)
d) Scale running from 1 (totally unimportant) to 5 (very important)

Information

This aspect of the aligning process concerns the information needed to gain more insight into the problem and related HRD needs. The data presented in Table 2 indicate that HRD participants, their supervising managers and subordinates attach great interest to providing information (HRD representatives were not questioned in this perspective). The mean scoreof HRD participants on a five-point scale is 3.84 (SD=.86), supervising managers 4.03 (SD=.7269), and subordinates 3.63 (SD=.92) (Table 1). It turned out, however, that their interests are insufficiently converted into a real provision of information. With the exception of HRD representatives, respondents provided information, on average, on less than one information category out of ten, concerning less than one of the three distinguished policy levels (see Table 2). Table 3 visualizes that this has to be the operational level, where 81.8 % of HRD company representatives, 23% of HRD participants, 28.2% of their supervising managers, and 4.0% of their subordinates provided information mainly on the knowledge, skills and attitudes of the participants in the selected HRD programs

Table 2: *Strategic HRD aligning in companies: means per group of respondent, and level of agreement between groups of respondents and between respondents within companies*

	N	P[a]	M[b]	S[c]	H[d]	agreement within companies
number of stages in which was participated (maximum=2)	767	.62	$.99^{**}$	$.26^{**}$	.64	.15
number of categories of provided information (maximum=10)	767	.58	$.88^{**}$	$.25^{**}$	4.13^{**}	.09
number of policy levels of provided information (maximum=3)	767	.45	$.67^{**}$	$.18^{**}$	2.30^{**}	.08
number of consultative structures in which involved (maximum=4)	767	.50	$.66^{**}$	$.35^{**}$	1.30^{**}	.07
number of information gathering procedures applied (maximum=7)	723	.63	$.88^{**}$	$.34^{**}$	x	.10
number of types of HRD goals and objectives formulated (maximum=6)	767	1.01	1.18^{**}	.92	1.77^{**}	.02
number of policy levels of HRD goals and objectives formulated (max=3)	767	.89	1.01^{**}	$.80^{*}$	1.11^{**}	.03
number of aligning aspects (maximum= 4)	767	2.06	2.64^{**}	1.54^{**}	3.34^{**}	.14
number of aligning levels (maximum=3)	767	.79	$.94^{**}$	$.62^{*}$	1.73^{**}	.08

a P: Participant of HRD programs (N=357)
b M: Supervising manager of HRD participant (N=242)
c S: Subordinate of HRD participant (N=124)
d H: HRD company representative (N=44)
*) significant difference with the HRD participants as group of respondents, at 10% level (2-tailed)
**) significant difference with the HRD participants as group of respondents, at 5% level (2-tailed)
x) not applicable

Formalization

Formalization refers to the formal consultative structure and information gathering procedures of the aligning proces. Scant participation in formal or informal consultative structures was found and minor use made of information gathering procedures. The data in Table 2 indicate that HRD specialists, on average, participated in 1.30 of 4 consultative structures (formal and regular meetings as well as temporary or informal or other kind of consultative structures). The scores for the other groups of respondents are even lower (.50 on average for HRD participants, .66 for supervising managers, and .35 for subordinates). It also turned out that, on average, less than one of the seven procedures of information gathering (i.e. tests and other evaluation procedures, environmental scanning, analysis of documents like policy plans, and more informal ways of information gathering) were utilized by groups of respondents.

Table 3: *Percentages per respondent group of providing information per policy level*

org. level of providing information	H[a]	P[b]	M[c]	S[d]
strategic	79.5	6.4	18.2	3.2
tactical	68.2	16.5	19.1	13.7
operational	81.8	23.0	28.2	4.0

a) H: HRD company representative (N=44)
b) P: Participant of HRD programs (N=357)
c) M: Supervising manager of HRD participant (N=242)
d) S: Subordinate of HRD participant (N=124)

Decisionmaking

Decisionmaking is about making choices regarding the supporting of problems and developments in the company by using HRD programs and other learning interventions. This survey focused on the HRD goals and objectives of the selected HRD programs in the areas of automation and social skills. It proved that, on average, HRD goals and objective were formulated at one out of three company levels (M=1.11 for HRD company representatives, M=1.01 for supervising managers, M=.89 for HRD participants, and .80 for the subordinates). It mainly concerns the operational level including the learning goals, working behavior and performance results of individual employees. Data in Table 4 indicate that more than 70% of HRD specialists, 68% of HRD participants, 66% of supervising managers, and 54% of subordinates point to the formulation of goals at this operational level, concerning the knowledge, skills and attitudes of individual employees. The percentages of the other operational level goals are considerably lower. There are hardly any goals formulated at strategic and tactical company levels.

Table 4: *Percentages of respondents for decisionmaking in strategic HRD aligning (multiple response)*

goals and objectives to achieve	H[a)]	P[b)]	M[c)]	S[d)]
no specific goals and objectives	11.4	9.2	2.9	6.3
at strategic level				
performance results of the company some time after end of program	6.8	3.8	7.1	5.3
at tactical level				
performance results of the department some time after end of program	18.2	12.4	15.1	20.4
at operational level				
knowledge, skills and atitudes at the end of the program	70.5	67.9	66.4	54.0
working behavior at the end of the program	47.7	6.6	13.0	7.1
performance results of individual employees	27.3	7.8	13.9	5.3
other				
other kind of goals and objectives	6.8	5.8	4.6	9.7

a) H: HRD company representative (N=44)
b) P: Participant of HRD programs (N=346)
c) M: Supervising manager of HRD participant (N=238)
d) S: Subordinate of HRD participant (N=113)

Strategic HRD Aligning: Aligning Aspects and Aligning Levels

So far, the results of the four separate aspects of strategic HRD aligning, participation, information, formalization, and decisionmaking, have been presented. In order to gain an overall insight into the actual HRD aligning processes within the companies studied, two new variables were constructed. The first 'aligning aspects' indicates the number of aspects in which respondents were involved. The second 'aligning levels' indicates the number of policy levels (strategic, tactical and operational) that were included into the aligning process. The findings, also represented in Table 2, indicate a virtual absence of strategic HRD aligning in all aspects and levels in the companies studied. HRD company representatives were involved in most aspects (M=3.34) and aligning levels (M=1.73), while other groups of respondentswere less involved, on average, in all aspects and levels of strategic aligning.

Strategic Partnership

In the foregoing sections many differences between the groups of respondents were found concerning their involvement in the four aspects and three levels of strategic HRD aligning. More insight into these differences is needed in order to draw a conclusion at the level of strategic partnership. Tabel 2 presents the results of the analysis indicating that the scores of supervising managers, subordinates and HRD company representatives significantly differ in many ways from those of HRD participants. Supervising managers, for instance, were involved in more stages of the aligning process, provided information on more categories and policy levels, formulated more kinds of goals and objectives than did HRD participants.

The intraclass correlation coefficient (Bryk & Raudenbusch, 1992) is used to search for the level of agreement between all four groups of respondents on all variables concerning strategic HRD aligning. If they fully agree, this coefficient is equal to 1. All variance is then explained by differences between companies. If all respondents in a company fully disagree, the coefficient is equal to zero. Variance is then explained by differences between individual respondents. Based on the data in the last column of Table 5, it may be concluded that respondents do not agree very much concerning their opinion on all items of strategic HRD aligning. This is especially the case for kind and level of HRD goals and objectives formulated (with coefficient .02 and .03 respective).

Differences Between Economic Sector and Type of HRD Program

The data in Table 6 shows that strategic HRD aligning process in the case of social skills programs significant differs from automation programs in most perspectives.

Table 6: *Differences in strategic HRD aligning for economic sector and type of HRD program*

	N	type of HRD program [a]	econ sector [b]
number of stages in which was participated (maximum=2)	767	.36**	-.01
number of categories of provided information (maximum=10)	767	.39**	.24
number of levels of provided information (maximum=3)	767	.21**	.05
number of consultative structures involved (maximum=4)	767	.18**	.03
number of information gathering procedures applied (max=6)	723	.22**	.06
number of types of HRD goals/objectives formulated (max=6)	767	.05	.03
number of levels of HRD goals/objectives formulated (max=3)	767	-.01	.02
number of aligning aspects (maximum= 4)	767	.40**	-.08
number of aligning levels (maximum=3)	767	.16**	.08

a) difference between social skills programs compared to automation programs

b) difference between the financial and commercial services sector compared to the industrial sector

***) significant difference between social skills programs compared to automation programs at .05 level*

No significant differences between the automation and social skills programs, however, were found concerning the kind and level of HRD goals and objectives. It looks as if the aligning processes in the case of social skills programs were more intensive than those of automation programs. This, however, did not result into the formulation of more kinds of HRD goals and objectives on various policy levels. As was expected, no significant differences are found for the economic sector.

Conclusion and Discussion

In order to answer the main research question regarding the level of vertical HRD policy integration, the survey investigated how strategic HRD aligning processes had taken place within the companies studied. Results indicate that HRD participants, their supervising managers and subordinates attach great interest to contributing to aligning processes (HRD representatives were not questioned in this perspective). It turned out, however, that their interests are insufficiently converted into real contributing activities. Findings indicate that, on average, the four groups of respondents were involved in less than one of the three stages of the aligning process. With the exception of HRD representatives, they provided information on less than one information category out of ten. Also scant participation in formal and informal consultative structures was found and minor use made of information gathering procedures. In most of the companies studied, no broad aligning process at strategic, tactical and operational levels was found. The aligning process was restricted to one organizational level, on average, mostly the operational one. This means that in most cases HRD goals and objectives were formulated concerning the skills, knowledge and attitudes that participants had to master at the end of the program. In this context, no differences were found between automation and social skills programs. Both programs, however, do vary on the three other aspects of the aligning process. Generally speaking the aligning process for social skills was somewhat more intensive than for automation programs. The four groups of stakeholders varied in their contribution towards the aligning process. This is mainly the case for the kind and level of HRD goals and objectives they planned to realise with the HRD programs. This impedes the reaching of 'strategic partnership', which is necessary for achieving strategically aligned HRD programs. It also impedes the achievement of consensus, or external consistency between all stakeholders on what the problem is, and how it will be resolved by targeted HRD programs or other learning interventions. External consistency is seen as 'the homogeneity of the notions of parties involved on what the problem is and how it can be solved by means of educational provisions' (Kessels, 1993, p. 27).

Based on the findings, the conclusion can be drawn that, in general, the HRD aligning process within the companies studied was not really strategic and hardly interactive. It is then problematical to harmonise HRD policy processes in a vertical direction. This kind of harmonization was hardly found in the companies studied. Many respondents were not involved in the aligning process. HRD participants, their supervising managers and subordinates seemed to have little idea of important data at strategic and tactical organization levels, which is needed to gain more insight into the problem and into related HRD needs. HRD goals and objectives are mainly formulated at the operational level, concerning knowledge, skills and attitudes of employees at the end of the HRD programs. Although the higher goal levels are not frequently mentioned, these goals are important to clarify the importance of the newly acquired competencies for the whole company.

The absence of vertical policy integration hinders the extent to which horizontal integration takes place. Horizontal integration means the harmonization of various kinds of policy (Leijten, 1992; Leget, 1997; Glaudé, 1997), in this case, the harmonization of HRD policies and the mission, policy and strategy of the organization as a whole. If the intended HRD goals and objectives within the organization are unclear, then it is problematical to arrive at strategically aligned HRD programs and activities. Therefore companies need to strive to involve all relevant stakeholders whenever possible and functional with the strategic HRD aligning process. The necessary information for problem solving needs to be gathered in formal and informal consultative structures at various policy levels, while different kinds of HRD goals and objectives at several policy levels should be formulated in order to achieve vertical policy integration. By focusing on these four aspects, the aligning process will result in more strategically aligned HRD programs and activities in which employees acquire the knowledge and skills needed for an organization now and in the future. Cooperation between respondents - strategic partnership - is also necessary in order to gain consensus on what the problem is and how it can be resolved. The HRD representatives need to play a key role as HRD consultants in all of this in order to support other stakeholders in the aligning process.

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Speculating About the Connection of Management Development and Organizational Goals: A Post-data Collection Interpretation.

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This paper reports a post-data collection interpretation derived from the evaluation of an international management development program. The speculations offered here emerged as themes from the data analyzed. Background information about the program evaluated is provided here to contextualize the post-data collection interpretation. Implications for the field of HRD are embedded in the discussion of each scenario that emerged from the data.

Keywords: Organizational strategy, Management development, International evaluation

In 1997, a team of performance consultants (including the author of this paper) from TSI Consulting Partners, Inc. (TSI), of Kalamazoo, Michigan, conducted the evaluation of a management development program (MDP) designed and implemented for PLAN International (a service-to-children organization that operates in developing countries) by Training Resource Group (TRG) of Alexandria Virginia, from 1993 to 1997. The management development program (MDP) was conceived of as a five-year staff development initiative to build more effective managerial capability in the field organization of PLAN international (Jordan, Levin, & Dulohery, 1996). The MDP consisted of two courses: an 8 day Management Development Course (MDC) and a follow-up 4 day Management Skills Renewal (MSR) session. As the evaluation of the MDP was conducted, TSI evaluators went after targeted examples of application of it, against PLAN's strategic objectives. The findings from the evaluation were presented at the Annual Meeting of the American Evaluation Association (AEA), November 7, 1998, in Chicago, IL (Montesino & Braatz, 1998). In the final phase of the data analysis, the author of this paper noticed the emergence of a series of scenarios that prompted the speculations reported here. As such, these tendencies are the result of purely post-facto interpretations. The purpose of this paper is to present a series of scenarios that might emerge from the evaluation of any management development program. It is not intended to discuss the pervasiveness of each of these scenarios in the context of the specific program evaluated.

Training impact has been explored in different ways in the field of human resource development (Brinkerhoff, 1987; Kirkpatrick, 1994; Phillips, 1996; and others). For the purpose of this paper, training impact is defined as the individual and business processes and performance improvements that enable increases in staff capability, as proposed by Brinkerhoff (1987), Brinkerhoff & Montesino (1995), among others. Staff performance is an interactive factor influenced not just by skills and knowledge (training outputs) but also by the work environment (opportunities to use learning, performance measures, incentives, support from supervisors, alignment with strategy and so forth), as proposed by Brinkerhoff & Gill (1994), Montesino & Sherr (1997), and others. Training alone produces only capability for performance, but it is performance (application of learning in the change of crucial work behaviors) that produces business impact. The alignment of training with the goals of the organization, then, is a powerful drive for application. The scenarios discussed here were constructed as the author looked at that connection in the context of the management development program evaluated.

The Evaluation of the Management Development Program (MDP)

The overall goals of the training evaluation conducted by TSI Consulting Partners, Inc. (TSI) were to enable PLAN International to: a) determine how effective the MDP initiative was in achieving business results for PLAN, b) establish why the training did or did not have impact for various participants, and c) determine what changes could be made to maximize the effectiveness of similar learning experiences in the future. The evaluation report is not the primary focus of this paper. The training evaluation conducted served as the source of empirical information to allow the author to speculate about the relationship between organizational goals and the management development program.

The primary evaluation method employed by the team was site visit and staff interviews, which enabled the evaluation team to identify and richly describe MDP training impact, and to understand this impact in the context of

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PLAN organizational goals and working conditions. To limit evaluation costs, site visits were conducted in only two of the regions in which PLAN operates: RESA (Region of East and Southern Africa) and SARO (South American Regional Office). These two regions were selected for site visits because more participants in these regions had completed both the MDC and MSR elements of the MDP. Thus , it was in these regions that the evaluation was most likely to uncover and gain the richest possible descriptions of potential training impact.

Four members of the evaluation team (including the author of this paper) conducted highly structured, 30-60 minute interviews with PLAN staff (MDP graduates, their managers, and those they supervise) in each site visited. A variation of the behavioral-event interview was developed as a protocol for each segment of interviewees. Interviews were conducted in English in East and Southern Africa, and translated to Spanish to be conducted in South America.

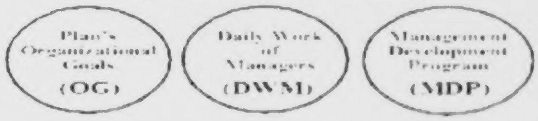
The evaluation team conducted one hundred forty-eight (148) interviews in the two regions mentioned before. Seventy-one (71) interviews were conducted in RESA (Egypt, Kenya, Uganda and Zimbabwe) at 18 different sites representing 12 program support units, 6 country offices and the regional office in Nairobi, Kenya. Seventy-seven (77) interviews were conducted in SARO (Paraguay, Ecuador, Colombia and Bolivia) at 13 different sites representing 10 program support units, 4 country offices and the regional office in Quito, Ecuador. Of the one hundred forty-eight (148) interviews conducted 88 were with MDP graduates, 22 with managers of the graduates, and 38 with individuals that these graduates supervise. This data collection from "above" and "below" the MDP graduates enabled the team to confirm results and provide a greater understanding of the factors that facilitated or impeded impact. Once the interviews were transcribed (those in Spanish were previously translated to English), the analysis was conducted. These 148 interviews provided the data for the interpretations presented here.

The findings from the evaluation were presented at the Annual Meeting of the American Evaluation Association (AEA), November 7, 1998, in Chicago, Illinois. These findings included items addressing the impact of MDP training, factors that influenced impact, and some generalizability issues as well as recommendation from the evaluation team (Montesino and Braatz, 1998). These findings are not discussed in this paper.

The Post-data Collection Interpretation

The evaluation team intended to document examples of credible, rich stories of application of the MDP rather than overburdened quantitative data. They achieved that, as reported by Montesino & Braatz (1998). The aim of this paper is the identification of a series of training-application situations that fit or do not fit the convergence of the daily work of managers/supervisors at PLAN International, PLAN's strategic goals (as contained in internal documents and communicated to trainers and evaluators), and the training model (MDP) designed and implemented by TRG (whose components are discussed in Jordan, Levin, & Duloherv, 1996; and expanded in Montesino & Braatz, 1998. Figure 1 shows the three important components.

Figure 1
Components of Strategic Alignment

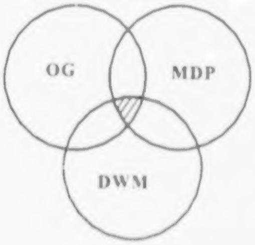


Ideal scenario

If the three elements depicted above converge, positive results from training are realized. A full account of the results of the specific program evaluated, which fit this convergence, can be found in Montesino and Braatz, 1998.

Figure 2 depicts the ideal convergence of the three important components. The convergent area represents the impact of training. That is, the instances in which the management development program supports the daily work of managers/supervisors enabling them to contribute to attaining organizational goals. Expanding the size of the convergent area, then, becomes the aim of any management development program.

Figure 2
Ideal Convergence



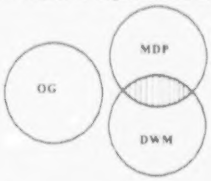
This ideal scenario represents the case in which a) the organizational strategies are clearly defined and communicated to employees and other organizational stake holders, b) a thorough needs assessment is conducted to identify where training is needed, what needs to be done to perform effectively, and who needs training, c) the organizational goals are as stable as the market (where the organization operates) permits, and d) each training activity is clearly traced to the strategy. The convergent area of the three elements could be as big as the three circles totally overlapping or as small as the actual convergence can be in the context of the organizational reality.

Less than ideal scenarios

As the interviews from Africa and South America were analyzed, it became evident that there were specific examples of training application that fit the convergence of the MDP, the daily work of managers/supervisors, and PLAN's strategic goals. These instances constituted the majority of the findings reported by the evaluation team. However, the evaluators also uncovered several marginal training-application situations where that convergence did not occur. As the interviews were analyzed, it was evident that a very rich set of unanticipated scenarios were emerging from the qualitative data, which might be useful for future evaluations of management development programs. That is, stories of instances in which the MDP supported PLAN's strategic objectives, but the work of managers was aimed at other goals, stories of the MDP being disconnected from PLAN's goals, and stories of managers benefiting from the MDP but contributing little to the attainment of the organizational goals. Again, the presentation of the following scenarios does not intend to discuss their pervasiveness in the context of the specific program evaluated.

Figure 3 depicts the instance in which the training program (MDP) and the daily work of managers/supervisors converged, but were both far from PLAN's business objectives.

Figure 3
Little Impact on Organizational Goals



This scenario can be typified bystatements from interviewees like the following:

> *I learned a lot in this course. Even if I don't have the chance to apply the skills I know in my current job, I will do so in my next job.*

> *PLAN's strategic direction is a moving target, as I see it. One never knows when it is going to*

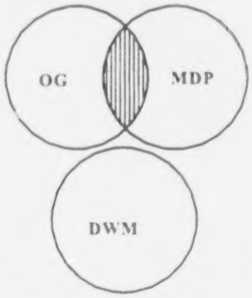
change. Strategies come and go and sometimes you don't even have the time to digest well the previous one when suddenly it is changed.

I have used the instruments to assess my own managerial style and monitor how I am doing, regardless of what happens around me. At least for me, the course was good.

This setting made for some gains in terms of individual learning for future applications (which could be within their current organization or someplace else), but did not necessarily contribute to the realization of the organization's goals. It usually happens when organizational strategies are developed by top management with little or no participation from frontline employees. This exclusionary process in the strategic formulation precludes those in charge of implementation from voicing concerns about them. It also implies a top-down communication that diminishes the understanding of the strategic direction of the organization and greatly reduces the ability of in-house trainers and outside consultants to translate the strategies into tangible training needs. Lacking that understanding of the real strategic direction, trainers tend to do their best to provide a service that can produce some type of impact. The type of impact tends to be individual learning that will, in the best case, produce behavioral changes in the desired direction to support the organizational goals. In the worst case, it becomes a waste for the organization that funds the training program.

Figure 4 portrays examples in which the training program (MDP) and PLAN's business goals coincided, but the daily work of managers/supervisors stayed away from them all.

Figure 4
Missed Opportunity



Typical statements related to this scenario are:

the things we learned were interesting, but that is not the way we work down here.

allowing participation of subordinates in decision-making may work well in Europe and North America, but down here things are different. My subordinates like to be told what to do.

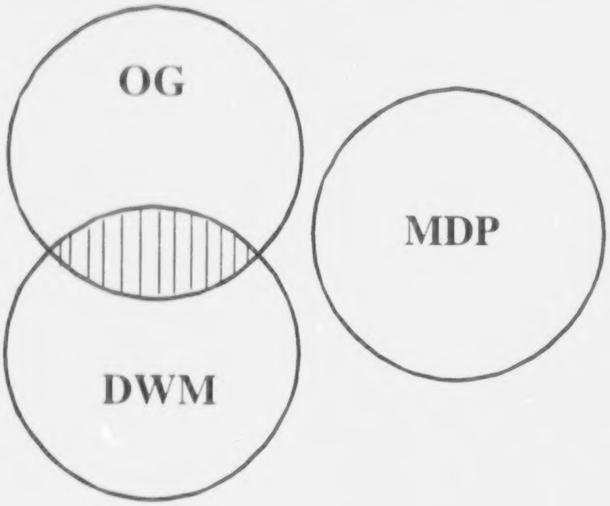
deep down, I don't believe in delegating too much as advocated in the management development program.

This scenario implies a missing opportunity for training application and the realization of the organization's strategic goals. A misunderstanding of underlying managerial values and the way people behave at work in different cultural contexts may explain this scenario. This is of particular importance for international organizations (multinational corporations, development organizations, non-governmental organizations, etc.) that have to deal with the great diversity of their workforce as they provide training.

Finally, Figure 5 exemplifies cases whereby the daily work of managers/supervisors and PLAN's strategic objectives were well aligned, but did not converge with the content of the training program (MDP).

Typical examples of this scenario include statements like these:

Figure 5
Fuzzy Strategic Priorities



my performance is evaluated in terms of how many children communicate with their respective sponsors, not by how much I empower my employees.

theoretically, we were supposed to empower our employees to empower the communities with which we work in a daily basis. None of them ever occurred in my case.

my immediate supervisor did not agree with the skills I learned. His lack of support signaled to me that other things were more important than trying to apply what I learned.

This scenario implies a failure of both the providers of training and the client in agreeing to address clearly the organization's strategic goals through the daily work of managers and supervisors, and how the management development program can help. Lack of clarity regarding the strategic goal to be achieved on the part of the client organization, and faulty needs assessment can be the typical causes of this particular scenario. Therefore, concerted effort should be made to avoid duplicity of goals as the needs assessment is conducted, and orchestrating all the human resource management subsystems to support a clearly defined strategic direction. That way, training and development efforts can be linked to the strategic goals without guesswork.

Concluding Comments

This paper contributes to new knowledge in the field of human resource development in many ways: 1) addressing the important connection that should exist between management development and organizational strategic goals; 2) the realization that this alignment/misalignment has implications for training application; 3) the realization that training impact is affected by a multiplicity of factors that are not so obvious at the time when the training program is designed.

Many unanticipated outcomes can be achieved when organizations provide training to their employees that could either benefit the organizational bottom-line or become a waste of effort, money, and time. The four (4) scenarios discussed here provide a good idea of the variety of variables that play a role regarding training impact. Taking into account all of them provides for an ideal scenario where a training program enables managers/supervisors through their daily work to attain goals that are valued by the organization. Less than ideal scenarios can hinder training impact.

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Strategic HRD and Stakeholder-Based Evaluation: A Conceptual Framework of In-Service Training Programs in the Evinset Project

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In this paper, the authors propose the concept of strategic human resource development as a strategy for supporting a teacher's personal and professional development – including career development - as an integral part of a school's organisational development. A stakeholder-based framework for evaluation of in-service training programs is also proposed. What is essential in this framework, is that evaluation is seen as an integrated part of the organisational culture of a particular school.

Keywords: Strategic Human Resource Development, Stakeholder-Based Evaluation, In-Service Training

Evinset is a term that has been developed to describe a project on evaluation and effectiveness in European staff development and in-service training programs. The European Commission supports the project under Comenius Action 3.1 of the Socrates program. The Evinset project was designed to identify and disseminate information about the critical factors necessary for the effective development of in-service programmes across the European Community. The Evinset project includes partners from Belgium, Finland, Greece and the United Kingdom.

The project aims to improve the quality of staff development practices in schools through evaluation of quality and effectiveness of in-service training programs and institutions providing the programs. The aim is also to develop a set of practical instruments for schools' staff development officers (SDO) to help them in identifying the organisational needs in their schools, planning in-service training programs, negotiating with training providers and evaluating the impact of programs after they have been delivered. (Evinset. Screening of INSET-programmes: A preliminary checklist; The Evinset Manual)

Problem Statement

In this paper, the authors deal with the issue of evaluation of in-service training programs in the Evinset project. It is proposed that a stakeholder-based framework for evaluation is essential and that it should be an integrative part of the organizational culture of a particular school.

It has been said that schools like other organizations are in a change and the importance of highly quality teachers has been called for in many official and unofficial contexts. Given this, it follows that the role of staff development practices in schools is seen as important.

There are, however, different voices regarding what kind of teacher's role is seen as being valuable in a society. There are several discourses about teachers and the teaching profession: the teacher as a researcher, a decision maker, a practitioner, a change agent, a reflecting practitioner, a professional, and phrases like teacher empowerment and teachers and education as investments for the future. All these terms and phrases imply many assumptions and visions, as well as contradictions in teachers' work in schools and arrangements of teacher education. (Niemi 1996.)

Niemi (ibid.) distinguished between two contrary directions in the debate on teacher development. The one direction is *1) toward more accountability and quality control* and the other direction emphasises *2) deeper and broader ethical responsibility*, which should be based on teacher's professional role and status. She also sees that these same tensions exist also in paradigms on teacher's in-service training. The one trend emphasises 1) *more centralised, competence-based training*, which serves in achieving mainly technical skills. In this approach, the quality of teaching and teacher competence is defined by narrow, easily measurable objectives. The other trend emphasises the importance of 2) *educating teachers as agents or active practitioners of educational reforms and changes*. Teachers

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are also seen as being more responsible for the development of their own profession in a larger sense. In addition, the professional autonomy requires that teachers become active partners in school development.

Fullan (1991) criticized staff development practices in schools for their inability to incorporate with characteristics of effective change processes. Fullan argued that most forms of in-service training are not designed to provide the ongoing, interactive, cumulative learning necessary to develop new conceptions, skills, and behaviour. In addition, failure to realise that there is a need for in-service training during implementation of change process, not just before conducting it (pre-implementation training) is a common problem.
Fullan summarized the main reasons for the failures of in-service training programmes as follows (Fullan 1979,3; see Fullan 1991, 316):

1. Single workshops are widespread but are ineffective.
2. People other than those for whom the in-service is intended frequently select topics.
3. Follow-up support for ideas and practices introduced in in-service programs rarely occurs.
4. Evaluation practices are not systematically implemented.
5. Individual needs and concerns of the learner are not adequately addressed in in-service programs.
6. The majority of programmes involve teachers from different schools and/or school districts, but there is a lack of recognition of the contextual local factors that may have an impact on the system to which they return.
7. Because the conceptual basis for planning and implementation of in-service programs is lacking it is difficult to guarantee the effectiveness of the programs.

Fullan's critique illuminates how the way the in-service training programs as well, as their evaluation is planned may have an essential effect on the actual impact of the training on individual as well, as on organisational levels. Niemi (ibid.) also addressed the problem that in-service training in Finland requires more than random seminars in order for a school community to develop its working culture. She sees the lack of continuum for pre-service to in-service training as a reason for the ineffectiveness of teacher education. The designation of who determines teachers' professional development is important. Fullan (1991) adds that it is evident that in-service training programs in schools are mostly gauged from the needs of interest groups other than teachers. The authors would like to emphasize the meaning of in-service training programs for individuals themselves. The manner in which learning activities are initiated and conducted is also important to notify. The principles of adult learning and development should be integrated into the planning process of in-service training programs. Careful consideration should be given to the unique nature of adult learning (cf. Krupp 1989; see also McQuarrie and Wood 1991,92).

Theoretical Framework

The authors view the practice in Europe of using readymade standardized instruments for evaluation as problematic. The purpose of the study is to design a theoretical evaluation framework for the Evinset project that would be useful for the countries involved in the project. The essential element is the present HRD as it is a strategic component of the organizational culture of a particular school. Before going to the evaluation framework, the authors provide a brief analysis of traditions of program evaluation by using Greene's (1994; see also Syrjälä 1996; Heinonen 1999a and 1999b) categories on evaluation (Table 1).

Among the alternative paradigms for program evaluation, four have captured considerable attention: postpositivism, pragmatism, interpretivism and critical theory (Greene, 1994; Greene and McClintock, 1991). Following table (table 1) illustrates differences between these paradigms according to

a) the assumptions related to man, the world and knowledge underlying each methodology,
b) the ideological view of the significance of the research in decision-making,
c) the values associated with the goals of the programme and research,
d) the audience to whom the evaluation is directed to, and
e) the methods favoured.

The first (postpositivism) framework represents the historically dominant tradition in program evaluation. The essential questions in this framework are oriented around the macro policy issues of programme effectiveness and efficiency. Greene sees the second (pragmatism) framework largely as a response to the failure of experimental science to provide useful information for programme decision-making and management. The value base is very practical and pragmatic. The third (interpretivism) cluster promotes a pluralistic value orientation and case study methodology. The approach seeks to enhance contextualised understanding of the programme. The fourth cluster (critical, normative science) represents the more normative turn in social science. It seeks to illuminate the historical, structural, and value basis of social phenomena, and in doing so, to catalyse political and social change. (Greene 1994.)

Table 1. Major approaches to program evaluation (Green, 1994, 532).

Philosophical Framework	Ideological Framework/ Key Values Promoted	Key Audiences	Preferred Methods	Typical Evaluation Questions
Postpositivism	Systems theory/ efficiency, accountability, theoretical causal knowledge	High-level policy and decision makers	Quantitative experiments and quasi-experiments, system analysis, causal modelling, cost-benefit analysis	Are desired outcomes attained and attributable to the programme? Is this programme the most efficient alternative?
Pragmatism	Management/ practicality, quality control, utility	Mid-level programme managers, administrators, and other decision makers	Eclectic, mixed: structured and unstructured surveys, questionnaires, interviews, observations	Which parts of the programme work well and which need improvement? How effective is the programme with respect to the organisation's goals? With respect to the beneficiaries' needs?
Interpretivism	Pluralism/ understanding, diversity, solidarity	Programme directors, staff, and beneficiaries	Qualitative: case studies, interviews, observations, document review	How do various stakeholders experience the programme?
Critical, normative science	Emancipation, empowerment, social change	Programme beneficiaries, their communities, other 'powerless' groups	Participatory: stakeholder participation in varied structured and unstructured quantitative and qualitative designs and methods; historical analysis, social criticism	In what ways are the premises, goals, or activities of the programme serving to maintain power and resources inequities in the society?

Greene's table is important in that it illuminates how different evaluation methodologies are oriented around the information needs of different audiences – from the macro programme- and cost-effectiveness questions of policy makers to the micro questions of the significance or of the meaning of the programme for individuals. Greene emphasizes that it is not the methods that distinguish one evaluation methodology from another, but rather whose questions are addressed and which values promoted. Greene also discusses how the different audiences represent implicitly or explicitly different values and political stances. (Heinonen 1999a and 1999b.)

The underlying theoretical framework is based on a pragmatism approach to program evaluation. This pragmatic philosophy is a relevant framework for evaluation of in-service training in the Evinset project. The goals of the Evinset project are practical, assigning equal importance to quality control and evaluation. The knowledge interest in evaluation is also practical. One might ask for example, which parts of the training program work well and which need improvement, how effective is the training program with respect to the school's goals (school development

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plan) and with respect to the teachers' needs (staff development plan)? Methods for conducting the evaluation may vary; typical is the use of mix-methodology.

Propositions

The authors propose a stakeholder-based framework for evaluation of in-service training programs in the Evinset project. Such evaluation can provide school development officers (SDO) information about the effectiveness of the in-service training programs with respect to the organisation's goals and the beneficiaries' needs. In the evaluation model, the depth of stakeholder participation is either extensive or substantial in all phases of evaluation (planning, conducting and utilizing evaluation findings) of in-service training programs. Control of decision making in the proposed model is balanced: school development officers and teachers conduct the evaluation in co-operation and partnership with other stakeholders.

During the 1990s, there was a growing interest in stakeholder-based evaluation although the concept itself was used in a quite varying ways. Cousins and Whitmore (1998) presented five different forms of stakeholder-based evaluation. They distinguished five forms of stakeholder-based evaluation according to

a) control of the evaluation process, which may vary from researcher controlled to practitioner controlled evaluation,

b) stakeholder selection for participation, which may vary from selection of all legitimate groups to selection of primary users only, and

c) depth of participation , which may vary from consultation to deep participation. The participation seems to essential question in all the forms of stakeholder-based evaluation. Table 2 presents a summary of Cousins's and Whitmore's analysis.

Table 2. Forms of Stakeholder-based evaluation by goals and process dimensions. A summary of table presented by Cousins and Whitmore (1998,12-13).

Label	*Goals/Functions*	*Control of decision making*	*Selection of participants*	*Depth of participation*
Stakeholder-based evaluation	Practical: evaluation utilisation; some emphasis on political aspects of evaluation	Evaluator: co-ordinator of activities and technical aspects of the evaluation	All legitimate groups: representation is key to offsetting ill effects of program micro politics	Limited: stakeholders consulted at planning and interpretation process
School-based evaluation	Practical: support for programme decision making and problem solving	Balanced: evaluator trains school-based personnel who do their own inquiry	Primary users: school-based personnel, mostly people who implement the program	Extensive: participation in all phases of evaluation
Democratic evaluation	Political: legitimate use of evaluation in pluralistic society	Balanced: evaluator and participants work in partnership	All legitimate groups: representation among participants is pivotal	Moderate: stakeholders control interpretation and reporting
Developmental evaluation	Practical: program improvement; evaluation utilisation	Balanced: evaluator and participants work in partnership	Primary users: mostly program developers and people who implement the program	Substantial: ongoing involvement and participation

Empowerment evaluation	Political: empowerment, illumination, self-determination	Participants almost complete control, facilitated by the evaluator	Primary users: usually key program personnel; sometimes wider groups included	Extensive: participation in all phases of the evaluation

In spite of differences among these five alternatives to stakeholder-based evaluation, there are also some fundamental commonalties. All stakeholder-based evaluation alternatives imply a basic assumption that programs have multiple stakeholders although the idea who these stakeholders are varies. The authors use Weiss's (1983a, 84) definition: *'... to mean either the members of groups that are palpably affected by the programme and who therefore will conceivably be affected by the evaluative conclusions about the programme or the members of groups that make decisions about the future of the programme, such as decisions to continue or discontinue funding or to alter modes of programme operation.'*

Thus, stakeholders have a personal interest for the evaluation. The stakeholder concept represents an appreciation that each programme affects many groups, which may have divergent and often competitive concerns, different interests and information about the programme, and which also may hold different power positions to make decisions about the programme. For example, programme sponsors' questions and concerns may differ from those of programme implementers. (Weiss 1983b and 1995.)

In stakeholder-based evaluation, it is on the evaluator's responsibility to reveal and answer the questions that those groups who have been identified as stakeholders may have. To put it briefly, in stakeholder-based evaluation the evaluator seeks to obtain as many perspectives as possible. The aim is to deliver an evaluation that is representative and fair, and collaborates in some ways with individuals and/or groups who have a stake in the programme being evaluated. (Bryk 1983; Guba and Lincoln 1989; Heinonen 1999a and 1999b.)

The authors propose a model which applies ideas from Nevo's (1993 and 1994) school based evaluation model (see also Alvik 1995; Cousins and Whitmore 1998) and Patton's (1994 and 1997; see also Cousins and Whitmore 1998) developmental /utilisation-focused evaluation as a practical evaluation model for the Evinset-project (see table 2).

For example, Nevo (1993,1994; see also Cousins and Whitmore 1998) has recommended developing 'evaluation-mindedness' in schools through school-based mechanisms for evaluation. Such mechanisms may provide a basis for dialogue between school staff and those providing in-service training activities.

Practical goal of evaluation in the suggested model is to provide support for staff development officers in schools for improving the quality of staff development practices. Thus, in the evaluation model we see the utilization of evaluation findings into practice important.

Although there is no formula to follow when undertaking stakeholder-based evaluation, some important phases or issues may be identified. Usually, stakeholder-based evaluation begins by identifying stakeholders and their concerns, claims, and issues. In the proposed model, the primary users of evaluation information are considered as stakeholders or essential audiences. These stakeholders may be school-based personnel (teachers), program developers and people who implement the training (staff development officers in schools and mid-level program managers and trainers in the outside training companies or institutions, administrators such as principals and other decision-makers).

Finally, what is essential in the evaluation model, is that evaluation of in-service training programs is integrated into the organizational practices of schools. It is not an event-driven procedure conducted by an external evaluation consultant. Instead, it is an ongoing process where evaluation team members facilitate the continuous learning of the members in the school organization (cf. Preskill and Torres 1999). The authors have created a model (see Figure 1, page 7) that shows relationships among HRD activities, evaluation, staff development officer in the school, and outside providers on in-service training programs.

The major goal of HRD activities in a school is to develop and support the organization's self-renewing capacity by training and improving the performance of teachers through specific learning activities. In our model the concept of strategic HRD relates to the way in which school as an organization develops its strategic training plans (staff development plan) to link training to the organizational objectives (school development plan). Consequently, we emphasize that the design of schools' staff development plan should not be taken as a separate procedure distinct from the design of the school's organizational development practices including school development plan.

Our model also takes into account the role of staff development officer as a mediator between school's HRD activities and outside providers of in-service training programs. Staff development officers conduct need assessments in schools to uncover the gaps between ideal and actual performance as either deficiency marking past or present performance, or opportunities impelling future job changes. In addition, we see the role of staff development officers in schools as internal change agents. They support teachers' individual development and facilitate school's organizational development by providing learning activities (in-service training programs) that enhance the skills, competencies, knowledge, and attitudes of teachers that are needed for organizational efficiency (see also Gilley and Eggland 1989).

Contributions to New Knowledge in HRD

This model provides systems development approach to HRD in public schools for the partners involved in the Evinset project – Belgium, Finland, Greece and the United Kingdom. The idea of HRD as a strategic component of staff development and the resulting stakeholder evaluation are critical to this multi-nation project.

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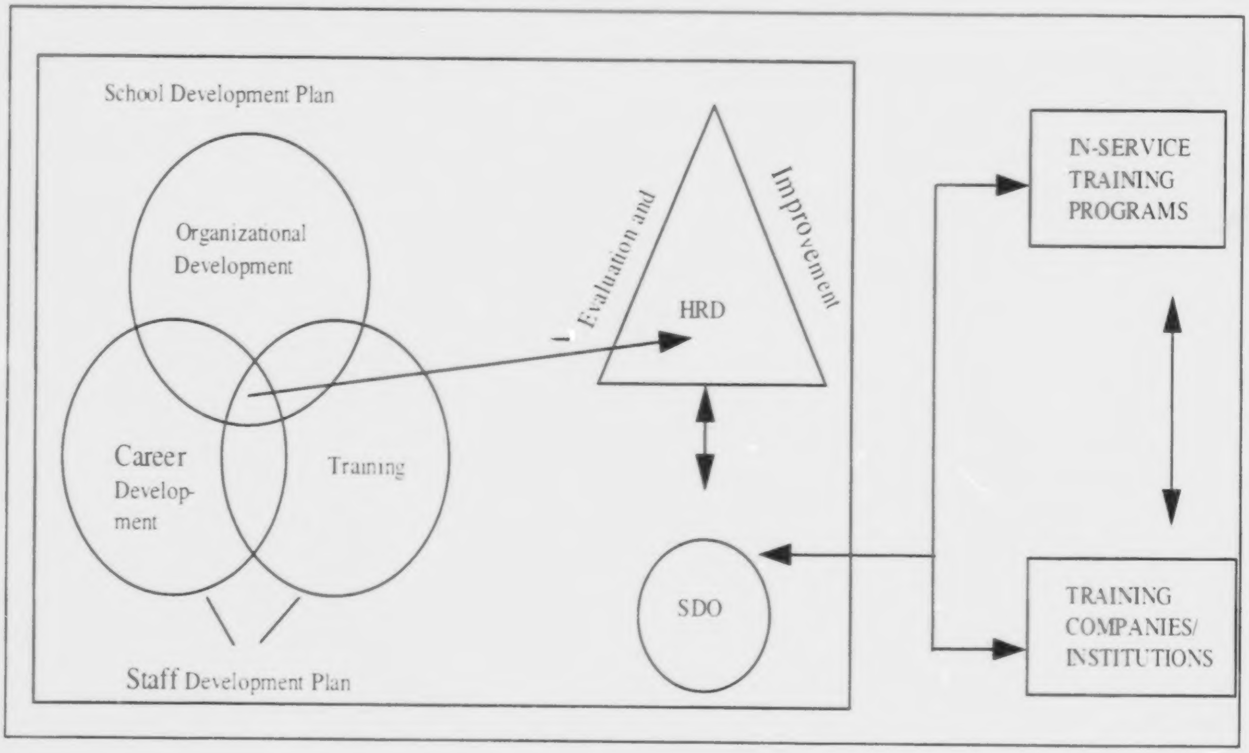
Figure 1. HRD in School Development


School Development Plan
Organizational Development
Career Development
Training
Staff Development Plan
Evaluation and
Improvement
HRD
SDO
IN-SERVICE TRAINING PROGRAMS
TRAINING COMPANIES/ INSTITUTIONS

Context and Causation in the Evaluation of Training: Relating Economic and Learning Transfer Theory

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This paper links three disparate literatures addressing the effectiveness of HRD: economics, evaluation, and learning transfer. Economic models are shown to be inadequate in assessing HRD effectiveness because they ignores the individual firm context. HRD evaluation models, which focus on the individual program level, are also limited. The influences approach represented by the learning transfer literature show promise for linking economic and HRD theory because they incorporate firm context when determining effectiveness.

Keywords: economics, learning transfer

The pre-eminence of knowledge and skills as the sources of wealth creation and economic growth is, along with globalisation, one of the major issues in business at the end of the 20th century. This topic has been covered widely to the extent that the most productive areas of recent management thinking have been focused almost exclusively on the means through which this new paradigm can be exploited. As a result, HRD has been propelled into a central role in management thinking. However, this has not been always reflected in practice since many of the methodologies for monitoring and assessment continue to reflect the previous importance of fixed capital and the quantity of labour employed.

The central importance of HRD in the modern economy is expressed by Eliasson (1994) who states that:

> *Human competence dominates economic performance at all levels. Its hallmark is heterogeneity to the extent that in each agent certain dimensions of it are unique and not (directly) imitable or communicable.* (p.177)

This short passage comes close to capturing the essence of the central problem discussed in this paper. When dealing with the development of human competence, the context is of the utmost importance. When evaluating training, it is important to remember that not only do the individuals being trained differ in their learning abilities and requirements, but there are differences arising from the trainer and the environments in which the training is given and the learning put to use. This complexity means that aggregate evaluation may miss important aspects and that an individualised approached is required.

This paper reviews some approaches to the evaluation of training from the literature. The next section describes the approach adopted in the economics literature and identifies some inherent weaknesses. These arise from the insufficiency of the model of the firm that dominates mainstream economics. Subsequent sections assess models derived from the HRD literature and identify the strengths of a complex model that has emerged in recent years. The final sections discuss the means through which this model may be operationalized and suggest some possible extensions.

The conclusion of the paper is guided by two propositions. First, the most useful results when assessing HRD interventions will be derived where the analysis takes place at the level of the individual, with a possibility for aggregation to the level of the firm. Second, as a result of the range of factors that can influence uptake and performance, the model applied must recognise that no simple relationship exists between training interventions and changes in output. This means that the approach adopted must be able to identify not only what training is required, but also why instances of training have particular impacts. As a further development, it is suggested that an ability to determine these factors in advance of the expenditure of resources would increase greatly the added value of efforts to monitor the returns to training.

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Assessing the Benefits of Training: Probing in the Dark?

The argument for training is generally put in terms of its importance for competitiveness. However, while admitting that there is a paucity of information on the precise level of expenditure on training, and the benefits derived, studies often conclude that past levels of investment in HRD are inadequate for economic growth. There is usually an argument for a role for state or collective intervention in overcoming this deficiency. Clearly, there is an acceptance of a market failure. Underlying this is the influential work of Becker (1964) who emphasised the need to distinguish between general and specific skill development and identified the problems that arise from the portability of many skills. One effect of this analysis has been that economic research has tended to concentrate on the aggregate evaluation of publicly funded programmes or policy interventions. However, this is insufficient to conclude that a particular programme of training represents a worthwhile investment at the level of a particular firm.

The issue of the optimum level of HRD has been widely discussed in Ireland and similar tensions appear. The case in favour of the importance of training was made forcibly by the Culliton Report (Government Publications, 1992, p.11) which went as far as to contend that the Irish education system required review as it was overly academic and under-emphasised the need for vocational education or training. This view has been reflected in changes in the education system in recent years. NESC (1993), in a comparative study of Irish firms, also found that

> *...competitive performance is adversely affected by poor quality human capital...there is a skills gap between Ireland and best practice firms in competitor countries.* (p.206)

This finding was confirmed by O'Connell and Lyons (1995) who concluded that:

> *There is evidence of a skills gap at operative, supervisory and management levels, particularly in smaller indigenous firms, which adversely affects productivity, competitiveness and growth prospects.* (p.65)

These ideas provided the context for the White Paper on HRD (Government Publications, 1997). It asserts that the development of Ireland's human resources is '*crucial*' to economic performance. It also reflects the data and informational deficiencies that may explain why investment in HRD has been insufficient, concluding that "information on human resource development practice in Ireland is quite inadequate. (p.48). However, the White Paper goes on to agree that:

> *The general conclusion to be derived from this review of findings relating to training endeavour is that the incidence of training activity in Ireland falls short of best international practice.* (p.51)

This begs the question: if HRD is beneficial at the level of the individual, the firm and the whole economy, why is existing investment inadequate? The portability of skills may be part of the answer, but it is not a full explanation. Many skills are firm and industry specific. In addition, if the individual is a beneficiary, then why should individuals be so reticent to accept some of the costs? It should be remembered that, even if there is good reason for collective action, the crucial decisions will still remain at the level of the firm.

The role played by uncertainty concerning the benefits derived from training is a major part of the explanation for this deficient level of investment. This uncertainty arises from difficulties in implementing an efficient methodology for the evaluation of training. This problem must be overcome to remove uncertainty surrounding the investment decision. However, moving directly to evaluation of outcomes risks making unjustified assumptions regarding the linkages between the various stages of the training process. It also fails to determine why outcomes may vary.

Evaluation in Economic Models of Training

While the approach adopted by economists to evaluating the impact of training on performance is generally theoretically consistent, underlying assumptions have led to problems and less than satisfying results. As argued below, these problems arise due to the adherence to a restrictive interpretation of the nature of firms, what they do and how they operate. The theoretical foundations of most approaches lie not with economic theories of the firm, but with economic growth models. The most widely applied theory of economic growth proposes that the rate of growth is related to changes in the quantities of capital and labour available in an economy, and a poorly specified productivity, or human capital, variable. The problem has always been that empirical estimations suggest over 50% of observed growth is accounted for by this productivity variable. It is also likely that this proportion may be rising.

Research shows that inclusion of a variable to account for education is useful, but insufficient, to explain the differences in growth rates internationally. Research into the impact of training on productivity - distinguished from education by being delivered to those in employment - began by looking at data on individual workers. The results were not particularly encouraging, partly due to difficulties in specifying the effects over time. Bartel (1994) marks a shift away from this through the development of an empirical model that relates expenditure on training within firms to lagged changes in productivity. The results showed a positive relationship, but could be criticised due to a lack of control variables. For example, it may be the case that firms engaged in high investment in training are of a particularly progressive outlook of are undergoing other improvements. However, this approach has been influential in the framework adopted in subsequent research. In general, economics has tended to completely ignore intermediate steps and attempt to find relationships between training as an input and output measures such as changes in productivity. While the effect on output may be the ultimate objective of training, the linkages have not been explored in economic research, or even recognised as intermediate steps in many cases.

The findings of two further pieces of research are worth noting. Black and Lynch (1996) undertook an elaborate econometric analysis of the relationship between training and company performance. The data they used identified different types of training and also used variables to allow for differences in the characteristics of the person obtaining the training. They find that the impact of training on productivity is related to the time between the training and the measurement of its impact.

> *... current training lowers productivity, while past training raises current productivity. This is very similar to what we see happening with the age of the capital stock in manufacturing.* (1996, p. 265)

Their finding is very illuminating since it points clearly to the importance of firm context and organisational characteristics to the results obtained from training. The firm and its managers need time to integrate newly acquired skills into existing processes and organisational structures. However, it is not possible to pursue this idea within this approach. Black and Lynch, as is the case with many other economic researchers, can only point to problems regarding who should pay for training and the importance of the difference between job specific and general training. The influence of Becker (1964) is clear.

Barrett and O'Connell (1998) use a model similar to Bartel's to estimate the returns to in-company training using Irish data. They differentiate between general and specific training on the basis that employees who receive general training are more likely to quit, thus removing or reducing the impact on company performance. A 3-year time-lag was allowed for the effect of the training. The unexpected finding was that general training increased productivity, but specific training had no such effect. Being concerned that there may be a problem with matching new skills to old processes, and aware of the Black and Lynch conclusion, they included variables to allow for management and process innovation in firms in the sample. This is a rare attempt in economics to model management decisions and organisational characteristics as explanatory variables, rather than relying on an assumption of strong rationality and changes in inputs to explain changes in output. However, the results were disappointing: the variable for specific training remained statistically insignificant while none of the variables for innovations were significant either.

These results are certainly not what HR managers would hope for and are in keeping with the conclusions of the survey by Walsh (1998):

> *There is a consensus among economists that human capital formation is at least as important as physical capital formation among the determinants of a country's long-run growth record. ... [However,] the return to investment in formal academic education seems to be higher than that to investment in vocational training, especially when the latter is not on-the-job.* (p.13)

In other words, once a basic education is provided, such that people are taught how to learn and obtain basic skills, the best returns will be obtained from allowing them to learn from experience. While it is accepted that Walsh was more interested in assessing the role and impact of formal education as distinct from training, the research in the returns to training literature suggest his conclusion holds.

The Nature of the Firm in Economic Research

The results from economic models often suggest that company investments in the formation of skills are unlikely to lead to an acceptable level of return. However, before conclusions should be drawn from this, it is necessary to reconsider the nature of the firm as an entity in economic research. Although there have been considerable improvements in the understanding of the productive process and the role of information in recent years, mainstream economics continues to view the firm as a black box within which rational decisions are made given a set of input prices and market conditions. One result is that growth is analysed in term of identifying a direct relationship between changes in inputs and changes in output. However, this approach makes it impossible for mainstream economics to answer three questions:

- Does training increase the resources available to the firm?
- Does this result in an increase in the inputs used by the firm?
- Are there counteracting factors brought into play when training is undertaken - diseconomies of scale, restructuring costs or output price changes?

A different approach such as the framework developed by Penrose (1980) offers a way, as yet poorly developed, for economics to get around these problems. At its centre is the need to distinguish between the resources available to a firm and the inputs actually used by the firm. Penrose argues that inputs, as normally identified, are not the actual resources used by firms. Instead, firms use the services that such inputs can provide. The competency of the management is assessed by its ability to derive services from a given level of inputs. However, for ease of measurement, generic measurement standards tend to be applied directly to inputs. As a result of this clarification, there is no reason why there should be a simple relationship between changes in the quantity or value of inputs and changes in output. Furthermore, it is possible to derive an argument for the rational presence of unused inputs in a firm. These insights mean that it is now straightforward to use changes in learning and capabilities to explain changes in productivity.

> *The possibilities of using services change with changes in knowledge. More services become available, previously unused services become employed and employed services become unused as knowledge increases about the physical characteristics of resources, about ways of using them, or about products it would be profitable to use them for. Consequently, there is a close connection between the type of knowledge possessed by the personnel of the firm and the services obtainable from its material resources.* (Penrose, p.76)

When used in conjunction with the premise that the demand faced by a firm is not absolute, but is a function of the firm's management's ability to conceive of products and ways of selling products, it is clear that competencies determine the firm's ability to grow. However, a balance must be struck between the human resources available and the ability of the firm, encapsulated in the competency of the management to design structures and processes to derive services from these resources. Thus, there is no simple relationship between the human resources available, irrespective of the efforts or resources employed in developing them, and the output, growth or productivity of the firm.

While this insight would appear to comply with the real-world existence of firms, economics has been very slow to adopt or develop this approach. For a start, it leads to the proposition that the ability of a firm to expand is constrained only by the competency of its managers. This is in direct contrast to the notion of optimum size that determines the conclusions of most economic models of the firm. In fact, as pointed out by Best and Garnsey (1999), this argument, along with much of the framework developed by Penrose, does not fit easily with the mainstream of economic theory. Mainstream theory has continued to develop models aimed at explaining the size and the implications of the size of firms rather than the determinants of firm growth. However, this type of approach is increasingly utilised by new research in areas such as evolutionary economics that concentrate on production rather than exchange.

The focus in economics remains on prices: the prices of inputs determine production technology decisions in firms; the size of firms - relative to market size - determines output quantities and the factors that influence market prices. It is assumed that the firm is operating at the most efficient size and with the most efficient technology. That is, it is using all its resources in the proportions that result in the greatest output. At the same time, the range of factors that determine the nature of activity and decisions within the firm are largely ignored. The possibility of deriving a useful methodology to identify training needs, the optimal organisation and integration of new skills and to isolate the impact of resources applied to training is limited within this framework.

The Human Resource Development Approach

The human resource development field has taken the opposite approach of economics researchers. One group of HRD researchers interested in the economic benefits of training are evaluation researchers. Contrary to economics, they view human resources as inputs whose economic value to the firm can be enhanced through properly designed and implemented training programs. In that sense they are working inside the "black box" of the firm. Although they make no direct connection to Penrose (1980), their approach is entirely consistent with his perspective that it is the services the human resource inputs provide that enhance productivity, not the inputs themselves. In HRD language, by increasing the competence and capabilities of employees, returns to the firm can be increased.

Furthermore, the HRD perspective would regard aggregate training expenditures as an inadequate measure of the potential for productivity enhancement. To the contrary much of the HRD literature points to the poor return from much of the money spent on training (Baldwin & Ford, 1988). From this perspective, the poor returns found in the economic research are easily explained by inadequate training practice, not by inadequate potential for productivity enhancement. As demonstrated by Swanson (1988), these returns can be greatly enhanced through effective HRD practices, but such practices are not widespread.

The human resource approach regards investments in human resources within the firm as a key source of competitive advantage by increasing the efficiency or contribution of the firm's human capital (Becker & Gerhart, 1996). Furthermore, the contingency view of human resources, which holds that human resource practices must be matched to the strategy of the firm, has gained increasing attention instead of the universal view which maintains that there is a set of "best practices" to which all firms should adhere. Thus, from this perspective the HRD practices which occur inside the "black box" of the firm is of paramount importance in determining returns from HRD investments. The only way to accurately evaluate the effectiveness of HRD interventions then is to also capture the interaction with key components of the organizational system.

Weaknesses in the HRD Evaluation Approach

Part of the reason for the disconnect between economic research and HRD evaluation practice may be attributed to the relatively simplistic approaches employed until recently. The most popular framework for evaluation has been that presented by Kirkpatrick in a series of four articles for the American Society of Training & Development Journal in 1959 and 1960. In these articles he outlined his 4 levels model of *reaction, learning, behaviour and results*. Perhaps because of its simplicity and ease of understanding it has become the most widely known and accepted (by trainers) approach to the subject. Such has been the influence of this model that, 35 years later, Kirkpatrick (1994) could claim, with considerable justification, that very little had changed, in terms of content, since 1959. In fact, the later book can be seen as basically a repetition of the earlier articles.

This approach might be labelled the *outcomes* approach because the emphasis is on demonstrating that appropriate outcomes occur. A variety of HRD researchers have offered elaborations, updates and variations in an attempt to improve the taxonomy. Suggestions for modifications have included adding a fifth level to accommodate training's ultimate value in terms of organisation success criteria (Hamblin, 1974). Phillips (1997a, 1997b) has stressed the addition of return on investment to the analysis. Kaufman & Keller (1994) have proposed the addition of societal impact as a fifth level. Lewis (1996) offers an expanded model that captures context, process and outcome factors. Brinkerhoff (1987) offered a six-level system to blend formative and summative evaluation. Swanson and Holton (1999) created the Results Assessment System in an effort to provide practitioners a systematic and theoretically sound process for assessing learning, performance and perceptions.

Others have observed that some organizations are suggesting completely new approaches are needed (Abernathy, 1999). Several phenomenological approaches have emerged as alternatives. Preskill and Torres (1999) offer evaluative inquiry as a different approach that emphasizes evaluation as a learning process. The London Business School Approach (Michelli & Haskins, 1997) takes a similar approach by advocating that evaluation be integrated with the learning process. Thus, for most management development programmes, the evaluation process should be open and flexible reflecting the "experimentation and concrete experience" (Michelli and Haskins 1997) approach of the programme itself.

Although many contributions have been made to the literature since the 1950s, even Kirkpatrick (1996 p.54) stated that "the content has remained basically the same". However, there has been sharp criticism of this approach. It has been argued that the 4 levels approach is flawed as an evaluation model as it is no more than a taxonomy of outcomes (Holton 1996). Comprehensive studies on the 4 level model (Alliger & Janak, 1989; Alliger, Tannenbaum, Bennett, Traver, & Shotland, 1997) showed that the implied causal linkages between each level of the taxonomy had not been demonstrated by research. Research further suggests that reactions have little correlation with learning or performance (Alliger & Janak, 1989; Alliger, Tannenbaum, Bennett, Traver, & Shotland, 1997; Dixon, 1990; Warr & Bunce, 1995). It has also been argued that reactions should not be regarded as a primary outcome but, rather, as a moderator of the relationship between training motivation and learning (Mathieu et. al.1992). This is in direct opposition to the four-level model where trainee reactions, defined as happiness, are a primary outcome of training (Kirkpatrick 1994).

The case against the four level model is further reinforced when examining use of the four levels in practice. Surveys of evaluation practices based on the four level model have consistently shown that most organisations conduct some evaluations at levels one and two but many fewer evaluate at levels three and four.

Only a relatively small number evaluate at level four. In a recent study and review of evaluation practice studies in the U.S. Twitchel, Holton & Trott (in press) noted that despite mounting evidence of the payoff from investing in human resource practices and improved methods of evaluation, evaluation practices have changed very little in the last thirty years for which data is available. They conclude that:

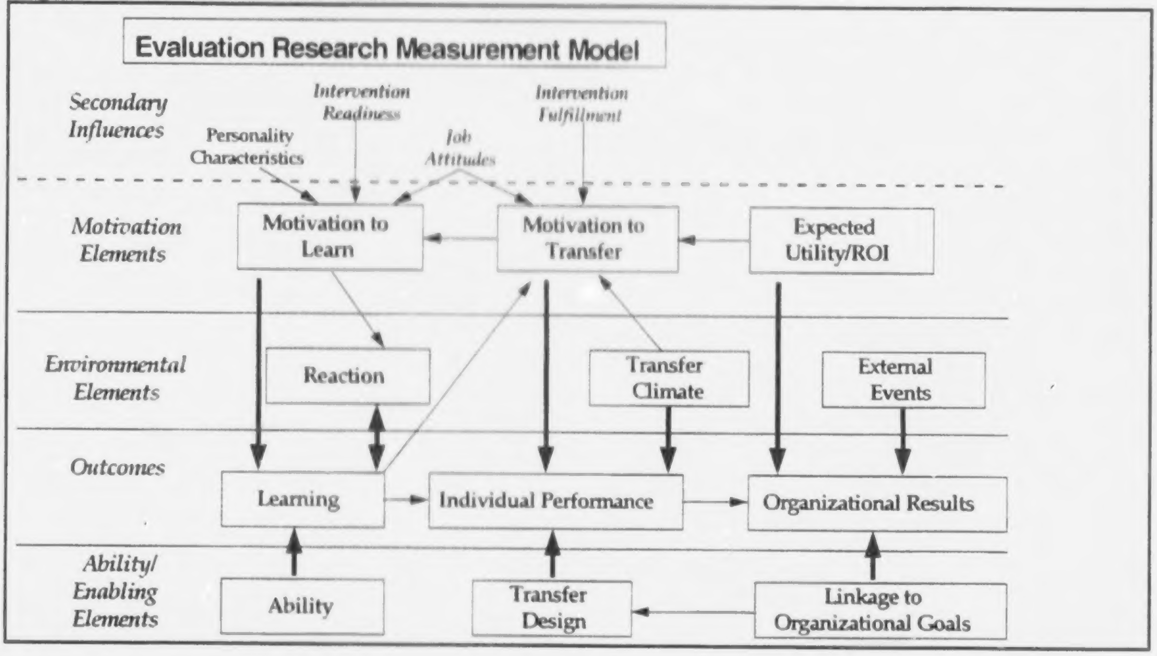
> *It would seem pointless to simply spend another 10-20 years pushing practitioners to use a taxonomy and methods that they continue to resist after nearly 40 years of effort. New research is needed that takes a more exploratory look at the decision and influence processes that managers use to make decisions about training.*

The Learning Transfer Systems Approach

There are also serious questions to be answered about the absence of essential elements from the model. The major intervening variables that affect learning such as trainee readiness, motivation, training design and reinforcement of training on the job are not specified in the four-level model. In addition, individual differences may also affect outcomes and these are not specified in the model. This has the potential to lead to faulty decisions about HRD intervention effectiveness (Holton, 1996, Swanson & Holton, 1999). In one sense, the pure outcomes evaluation approaches are quite similar to the basic economic models in simply measuring inputs and outputs, though at the program instead of the firm level.

Holton (1996) proposed an alternative, more comprehensive model which might be labelled the "influences" approach. The model was based on a weaving together of existing work in the area of the transfer of learning. This model, although complex, suggested that alternative strategies might be possible to enable the development of practical evaluation tools that were grounded in theory.

Figure 1: Holton's Evaluation Model


Evaluation Research Measurement Model
Secondary Influences
Personality Characteristics
Intervention Readiness
Job Attitudes
Intervention Fulfillment
Motivation Elements
Motivation to Learn
Motivation to Transfer
Expected Utility/ROI
Environmental Elements
Reaction
Transfer Climate
External Events
Outcomes
Learning
Individual Performance
Organizational Results
Ability/ Enabling Elements
Ability
Transfer Design
Linkage to Organizational Goals

The strengths of this model include the fact that it removes reactions as a primary outcome of training. The model is also holistic in its approach and moves the debate away from a concentration on outcomes to a discussion about how training works and how the factors that make it work can be enhanced in the organisation. By doing so it avoids the weaknesses that were identified in the case of outcomes-based models that assumed simple relationships and causal linkages were in place.

The reintroduction of context by several authors in search of approaches to supersede the 4 levels one is an interesting departure. Much work has been done on the transfer of learning into the workplace from the training intervention. Several influences on the motivation to transfer have been identified including intervention fulfilment, learning outcomes, job attitudes, and expected utility of results, (Broad & Newstrom, 1992; Baldwin and Ford, 1998). Holton and Bates (Holton, Bates & Ruona, 1999) encapsulate these approaches most successfully in their conceptual model of learning transfer systems.

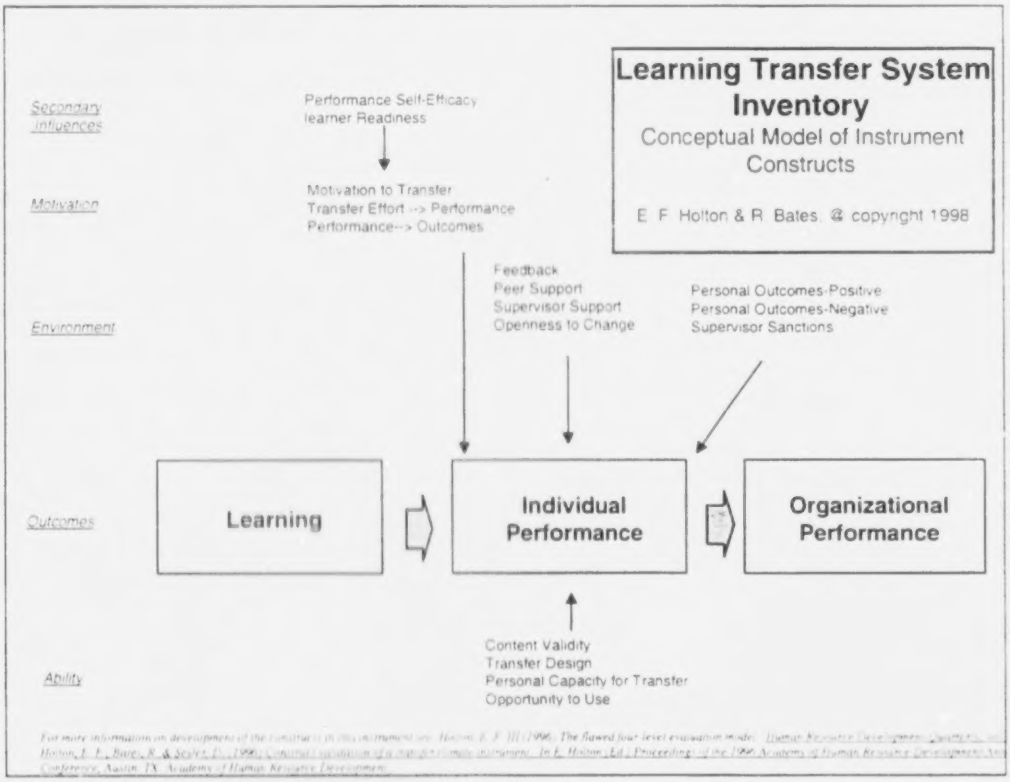
Learning transfer systems have the potential to help close the gap between economic theory and program-level HRD evaluation. As discussed, economists have no means to model what occurs inside the "black-box" of the firm. Thus, their assessments are at the firm level or higher. HRD evaluation has traditionally been at the individual learning program/event level, aggregating upward. However, HRD evaluation has mostly ignored other influences within the firm that affect performance outcomes from learning. The influences approach, characterized here by Holton's (1996) model, links the two by describing the system variables which intervene between program outcomes, and firm level outcome.

The *learning transfer system* is described as those organisational supports and constraints that influence whether participants take what they learn in the training environment and transfer it to the work environment. It describes one critical portion of the overarching Holton (1996) model, the transfer of learning into individual performance. This system is shown in Figure 4.

Recently, Holton has incorporated this framework into a decision-making tool as part of the Results Assessment System (Swanson & Holton, 1999). The Learning Transfer System Inventory (LTSI) (Holton, Bates & Ruona, 1999) was developed to assess the sixteen factors that influence transfer. It has been used mostly as a diagnostic tool to date - participants complete it at the end of training interventions and the results are used to assess the quality of the transfer climate and to indicate where changes might need to be made.

However, the LTSI is only a general diagnostic tool. Each organization is expected to have variations in its optimal configuration for learning transfer because of cultural differences. Thus, the leverage points for

Figure 4: The Learning Transfer System Inventory


Learning Transfer System Inventory
Conceptual Model of Instrument Constructs
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Secondary influences
Performance Self-Efficacy
learner Readiness
Motivation
Motivation to Transfer
Transfer Effort --> Performance
Performance--> Outcomes
Environment
Feedback
Peer Support
Supervisor Support
Openness to Change
Personal Outcomes-Positive
Personal Outcomes-Negative
Supervisor Sanctions
Outcomes
Learning
Individual Performance
Organizational Performance
Ability
Content Validity
Transfer Design
Personal Capacity for Transfer
Opportunity to Use

For more information on development of the constructs in this instrument see: Holton, E. F. III (1996). The flawed four-level evaluation model. Human Resource Development Quarterly, *Holton, E. F., Bates, R. & Seyler, D. (1996). Construct validation of a transfer climate instrument. In E. Holton (Ed.) Proceedings of the 1996 Academy of Human Resource Development An* *Conference, Austin, TX: Academy of Human Resource Development.*

learning transfer system improvement are expected to be both a function of a) deficiencies in specific factors and b) leverage points identified as predictive of transfer in the specific organization. For example, managerial support, an element in the LTSI, will be more critical in some organisations than in others while peer support might be more critical in some instances.

The next stage in the continuing program of LTSI research is to investigate its predictive validity with organizational performance measures. The general promise of this approach is to enhance evaluation research by demonstrating that system influences add predictive power to economic models which predict the return from investments in training.

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Does HRD Effectiveness Vary for Organization and HRD Related Factors?

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This study examines whether certain contextual conditions influence the effectiveness of HRD programs and activities. Stakeholders of two types of HRD programs who were also from companies in two economic sectors were asked to complete a questionnaire. No differences in perceived effectiveness was observed for the factors size and structure of the company, economic sector, structure of the HRD function and transfer conditions. Significant differences were found for the problem that serves as starting point for HRD, company HRD climate, position of the HRD department, and the form the HRD program takes.

Keywords: HRD Effectiveness, Contextual Characteristics, Multi-level Analysis

HRD programs and other learning interventions take place within the context of the company for which they are intended. According to contingency theory it is often assumed that there is a close link between characteristics of this context and the way in which organizational processes evolve. Deviating from an appropriate model, contingency theorists maintain, creates a lower degree of organizational effectiveness (Khandwalla, 1977; Van de Ven & Drazin, 1985). Literature indicates a number of contextual characteristics influencing organizational structures and processes. If these are not aligned with their contextual characteristics, a lower degree of organizational effectiveness is expected. Roth (1992), for instance, found that organizational effectiveness increased when decision-making characteristics were aligned more adequately with the (international) strategy of a company. Based on the aforementioned, it is assumed there will be less HRD effectiveness if HRD structures and processes do not match their contextual conditions. The question is, which contextual factors are important for achieving HRD effectiveness.

Theoretical Framework

Literature and earlier research (Wognum, 1998) indicate a number of contextual characteristics influence organizational structures and processes. These are usually divided into two categories: organizational factors and company environment (Mintzberg, 1983; Tjepkema & Wognum, 1999). Considering the HRD perspective, these characteristics refer to the organization of the HRD function, which is usually in the form of an HRD department, and to the environment of the HRD function, which can be divided into two parts: the company in which the HRD function is embedded, and the company's external environment the so-called macro-environment (Figure 1).

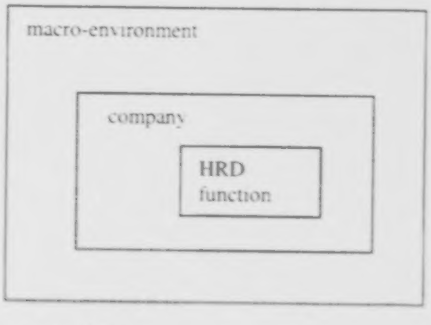

Figure 1: *the context of the HRD function*

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Characteristic of the Macro-Environment

The macro-environment consists of all forces which affect the company, such as demographic, social, economic, ecological, technological, political and cultural. Some of these forces have a direct or indirect impact on the HRD function (American Society for training and development, 1994). The ever-increasing trend toward automation, robotics, and other advanced computer applications, for example, requires workers with sophisticated competencies. The HRD function is obliged to deliver HRD programs which provide these workers with the required skills. Technological modifications and changes in product-market relations urge companies to train and develop their employees (Pettigrew c.s. in Garavan, 1991). These examples make it clear, that the macro-environment context will be reflected in the kind of problems or developments with which the company is faced. Such problems are starting points for HRD interventions so thst employees can obtain the necessary knowledge, skills, and attitudes needed. Therefore, macro-environment characterist ics are not a direct object of study but act more indirectly by considering the problem that serves as a starting point for HRD interventions. This problem can be conceived as a characteristic of the company.

Characteristics of the Company

Besides the aforementioned problem characteristic, other company related factors which may have an impact on company processes and the HRD function (Mintzberg, 1983, Tjepkema & Wognum, 1999) include the economic sector of the company, its size, structure, HRD climat and the degree of company innovation.

The economic sector is a characteristic which refers to a group of organizations producing the same kind of product or delivering the same type of service, i.e. agriculture, transportation and communication, retail and wholesale trade, insurance or service providing organizations. The economic sector characterizes the kind and complexity of a company's core processes and, by that, the core competencies needed. This affects company HRD policy processes. In certain sectors (e.g. construction) companies hardly offer any HRD activities, while in other sectors companies are extremely active in this field (e.g. insurance) (Wognum, 1998).

The size of the company influences company processes. In large companies these processes are much more formalized than in smaller ones (Mintzberg, 1983). It has been shown that in companies with more then 500 employees a more explicit training policy is formulated and drawn-up than in smaller companies (Mulder, Akkerman & Bentvelsen, 1989). Also a strong coherence was found between the size of the company and the level of HRD activities: the larger the company, the more HRD interventions were found (Centraal Bureau voor de Statistiek, 1995). Large companies often need other skills and attitudes than smaller companies. For example, companies with more than 1,000 employees seem to offer significantly more programs on marketing skills than companies with less than 100 employees (Wognum, 1998).

With regard to the structure of the company, the degree of organizational (de)centralization greatly exerts influence on company processes (Koopman & Pool, 1992), and including the HRD function. For instance, it influences the choice of target groups attending HRD programs, and the choice for the content of HRD intervention. Centralized companies typically offer fewer HRD activities for top management than companies with decentralized structures (Wognum, 1998). The level of (de)centralization also affects the way in which the HRD function is organized. In decentralized companies it is common to divide HRD responsibilities over a central HRD department (located at the central staff), and among several decentralized HRD officers or trainers (Wexley and Latham, 1991).

The company's HRD climate relates to the visible characteristics of HRD corporate culture (Wexley & Latham, 1991). Bates, Holton, and Seyler (1997) demonstrated the importance of introducing the climate factor into the HRD transfer study. The attitude of managers towards training, which is an important aspect of corporate HRD climate (Ford & Noe, 1987; Wexley & Latham, 1991), may affect their involvement in HRD activities or the opportunity they create for assessing training needs at all organizational levels. Their attitudes affect the level of investment in HRD interventions (Rothwell & Kazenas, 1989; Garavan, Barnicle & Heraty, 1993), and their willingness to consult with others on HRD issues (Kessels, 1993).

The degree of innovation within the company is another important contextual factor. Hall & Goodale (1986) point to a company's stage of organizational development as an important characteristic for HRD participation. By that is also meant the emphasis is on the degree of company innovation. For instance, companies with a lot of changes in work processes invest more in the development of their employees than companies which do not change their work processes (Useem, 1993).

Characteristics of the HRD Function.

HRD related factors which are seen as important for the HRD function include structure and position of the HRD department, degree of innovation within the HRD department, and the form the HRD program takes.

Based on Mintzberg (1983), it is assumed that structure and position of the HRD department (central or decentralized, staff or line), indicate where and by whom HRD decisions are made and what possibilities a company has for delivering effective HRD interventions as well as the focus of the HRD function (London, 1989). A decentralized department often works for the unit in which it is located - in many cases the operating core. A centralized department focuses on the overall organization, with top and middle management as target groups.

Following the foregoing reasoning, the degree of innovation of the HRD department is an important characteristic which will probably have an impact on its functioning and results.

The form the HRD program takes is one of the factors one has to account for when designing an HRD intervention. It depends on the kind of organizational problems the HRD department faces whether the program is tailored or customized program for a specific company, or a standard or other 'off-the-shelf' program, suitable for every company and problem situation.

Even though the form or quality of the HRD program may be good, it does not mean participants are able to transfer acquired knowledge and skills to their working situation. In other words, arrangements - the so-called transfer conditions - have to be made in order that employees apply the learned competences to the workplace (Thijssen & Den Ouden, 1995).

Organization and HRD Related Factors and their Impact on HRD Effectiveness

The aforementioned organization and HRD related characteristics, represented in Table 1, are expected to have an impact on HRD effectiveness. This is conceived as the extent to which HRD goals and objectives are achieved. In order to define the level of effectiveness, HRD effects can be measured at learning (effect on knowledge, skills and attitudes), behavior (effect on job behavior of individual employees) and results levels (effect on the performance results of groups, departments or the company) (Kirkpatrick, 1994).

Table 1: *Organization and HRD related factors by which the impact on HRD effectiveness will be explored*

Organization related factors	HRD related factors
Problem that serves as starting point for HRD	Structure and position of the HRD department
Economic sector	Degree of innovation of the HRD department
Size and structure of the company	Form the HRD program takes
Degree of innovation of the company	Transfer conditions
Company HRD climate	

Research Question

To create effective HRD interventions it is important to investigate which contextual factors have an impact on the effectiveness of corporate HRD programs and other learning activities, and to what extent. In other words: to what extent does HRD effectiveness vary for organization and HRD related factors, as represented in Table 1?

Methods

The survey reported here was carried out as part of a larger one among Dutch companies (Wognum, 1999). These were selected from a national database from the Association of Chambers of Commerce.

Sample. Two company related factors were used as selection criteria: size of the company and its economic sector. Following this criteria, 44 companies with more than 500 employees were selected from the aforementioned database: 11 from the industrial sector and 33 from the financial and commercial services sector. A non-response analysis showed no significant differences between the non-response group and the 44 companies in the study, concerning such contextual variables as size and structure of the company and structure and position of the HRD function. In each company one HRD program was selected (from the two frequently recurring fields of automation and social skills). This resulted in 23 selecting automation and 21 social skills programs. In order to define the effectiveness of the selected HRD programs, four categories of respondents within the company were selected: the

HRD company representative, a maximum of 15 HRD participants, their supervising manager and (if present) their subordinates. All groups can be considered as having an interest in the results of the HRD programs (so-called stakeholders).

Data collection. Data were collected in the spring and summer of 1997 using a questionnaire sent to 767 representatives of the four groups of stakeholders (44 HRD company representatives, 357 HRD participants, 242 supervising managers and 124 subordinates). The questionnaire was designed to collect information on the aforementioned contextual factors and HRD effectiveness. In order to compare the effects of the 44 HRD programs at the three identified effect levels, the perceived effectiveness by respondents was the object of study instead of the real effectiveness. This is based on the assumption that the importance given to effectiveness later is every bit as important as actual HRD effectiveness (Ford & Noe, 1987). Statements on the achieved effects of the selected HRD programs had answers on a five-point scale, running from 1 (totally disagree/not at all) to 5 (totally agree/completely) and a possible 6 score (for unknown, no idea, or not relevant).

Additional questions in the questionnaire for HRD company representatives concerned the company itself and HRD related factors. These included questions on the kind of problem that was a starting point for HRD (divided into three categories: to resolve a problem concerning employee, department or company performance; to improve certain working practices; or to change or renew the company situation), on the structure of the company and HRD function, on important innovations occurring since 1990 within the company as well as in the HRD function, on the design of the selected program, and on conditions made for transferring of the learning results into working practice. The questions had both pre-coded and open answers. Twelve statements focused on company HRD climate and comprised, among others, statements on a respondent' s perception of management attitude towards training. These statements also had answers on a five-point scale.

Response. 752 questionnaires were sent to the automation group (23 HRD company representatives, 320 trainees, 277 managers, and 132 subordinates). All 23 HRD company representatives completed the questionnaire, while 54% of trainees, 43% of managers, and 29% of subordinates responded. 740 questionnaires were sent to the 'social skills' group (21 HRD company representatives, 292 trainees, 251 managers, and 176 subordinates). All HRD representatives completed the questionnaire, while 63% of trainees, 49% of managers, and 49% of subordinates responded. The final group of respondents in this study had a sample size of 44 HRD company representatives, 357 HRD participants, 242 supervising managers and 124 subordinates. Although the response group may not be fully representative for all respondents within those companies, this may not be troublesome, since this study focuses on correlations between variables (Zetterberg, 1963).

Analysis. The two-stage sampling design (first a sample of companies, then a sample of respondents within each company) resulted in a hierarchical, nested data structure. Multilevel statistical models (cf. Goldstein, Rasbach, Plewis, et all, 1998) are suitable for handling data with such a structure. Unlike obvious techniques such as analysis of covariance or regression analysis, these multilevel statistical models allow statistical inferences both at individual respondent (sample size 767) and company (sample size 44) levels. Using these models it is possible to distinguish between within and between company relationships between variables. A one-factor analysis was used to assess the construct validity of two scales. From the scale 'company HRD climate', one item with factor loading below .40 was dropped for further analysis. Reliability of the remaining 11 items of this scale led to an alpha of .72 (M=4.03, SD=.45). Reliability of the nine items of the scale perceived led to an alpha of .89 (M=3.52, SD=.70).

The analysis is built on earlier findings on the impact of strategic HRD aligning, which is a key concept of HRD policymaking, on perceived HRD effectiveness (Wognum & Bosker, 1998, Wognum, 1999). It was then proved that strategic HRD aligning within companies has a positive effect on perceived HRD effectiveness of .47, and within companies a comparable effect of .49. Respondents' opinion on the quality of this aligning process even accounts for 22% of the variance in the HRD effectivess score (see model 2 in Table 2). Model 2 turned out to be the best fitting model to explain this effect on perceived HRD effectiveness (Wognum, 1999).

Results

For exploring the impact of organization and HRD related factors, the variables size and structure of the company, degree of innovation of the company, structure and position of the HRD department, degree of innovation of the HRD department, design of HRD programs, conditions made for the transfer of learning results, and company HRD climate are separately brought into Model 2. The results of these analyses per factor are discussed below and presented in Tables 2, 3 and 4. Only the significant results are presented. The variable economic sector only served as a selection criterium. It was not brought into the analysis since no significant effect on perceived HRD effectiveness was found concerning this characteristic (Wognum, 1999). For the factors size and structure of the organization, structure of the HRD function, and transfer conditions, no differences in perceived HRD effectiveness were observed. A link was found, however, between the following organization and HRD related factors and perceived HRD effectiveness.

Problem that Served as Starting Point for HRD

It was found that the problem that served as starting point for HRD has no significant effect on perceived HRD effectiveness in itself (Table 2, Model 3a).

Table 2: *Effects (and standard errors) of the problem that served as starting point for HRD, and of the interaction of this problem and type of HRD program, on perceived HRD effectiveness (number of respondents = 440; number of companies = 44)*

	model 2		model 3a		model 4	
intercept	1.83	(.16)	1.80	(.17)	1.91	(.17)
supervising managers	-.05	(.06)	-.05	(.06)	-.04	(.06)
subordinates	.14	(.11)	.14	(.11)	.16	(.11)
HRD company representatives	-.03	(.12)	-.09	(.13)	-.07	(.13)
strategic aligning within companies	.49	(.05)**	.51	(.05)**	.52	(.05)**
strategic aligning between companies	.47	(.19)**	.47	(.20)**	.50	(.17)**
type of HRD program[a)]					-.32	(.13)
change/renew comp. situation (contrastgroup)			-	-	-	-
resolve actual problems			-.10	(.18)	.20	(.24)
improve working practices			-.11	(.07)	-.08	(.09)
HRD program*resolve actual problems					-.64	(.35)*
HRD program*improve working practices					.03	(.14)
unexplained variance						
between companies	.075	(.02)	.076	(.02)	.048	(.02)
within companies	.304	(.02)	.287	(.02)	.285	(.02)
explained variance R^2	22%		25%		31%	
deviance	776.413		665.369		650.818	

a) automation programs (as contrast group) versus social skills programs

*) significant at $\alpha < .10$ (two-tailed)

**) significant at $\alpha < .10$ (one-tailed)

In interaction with the type of HRD program (automation or social skills) the problem that served as starting point for HRD proved to have a positive effect on perceived HRD effectiveness. If the actual performance of employees, departments or the entire company is starting point for HRD interventions, then the impact on perceived HRD effectiveness was .20 in the case of automation programs (see Model 4 in Table 2). For social skills programs this effect was then .64 lower, which is significant. This interaction effect explains 6% of unique variance in HRD effectiveness.

HRD Climate and Position of the HRD Department

The data in Model 3b (see Table 3) show that the effect of the HRD climate on perceived HRD effectiveness was -.19 (significant), meaning that HRD climate correlates negatively with HRD effectiveness. This factor explains 1% extra variation in perceived HRD effectiveness. No interaction effects were found between HRD climate and type of HRD program, indicating that the effect of HRD climate on perceived effectiveness is negative, regardless whether it concerns automation or social skills programs.

The same applies to the position of the HRD department when this is not placed in the management line, but is part of a staff department, for instance, the company's personnel department (see Model 3c in Table 3). The data indicate that the effect on perceived HRD effectiveness is .40 lower where the HRD department is part of a staff department, than when it has 'other position than a staff department', which is significant. Through this factor the variation in the perceived HRD effectiveness score was explained for 5% more. No interaction effect between 'position of the HRD department' and 'type of HRD program' were found, implying that the perceived HRD effectiveness score in companies with an HRD department as part of a staff department is significantly lower than in companies with an HRD department positioned as other than a staff department, no matter if it concerns automation or social skills programs.

Table 3: *Effects (and standard errors) of the HRD climate and position of the HRD department on perceived HRD effectiveness (with 'other position than a staff department' as contrast group) (number of respondents = 440; number of companies = 44)*

	model 2		**model 3b**		**model 3c**	
intercept	1.83	(.16)	2.61	(.49)	1.92	(.16)
supervising managers	-.05	(.06)	-.05	(.06)	-.05	(.06)
subordinates	.14	(.11)	.13	(.11)	.13	(.11)
HRD company representatives	-.03	(.12)	-.02	(.12)	-.04	(.12)
strategic aligning within companies	.49	(.05)**	.48	(.05)**	.49	(.05)**
strategic aligning between companies	.47	(.19)**	.52	(.19)**	.42	(.16)**
HRD climate			-.19	(.11)*		
position as part of a staff department					-.40	(.11)**
unexplained variance						
between companies	.075	(.02)	.066	(.02)	.045	(.02)
within companies	.304	(.02)	.304	(.02)	.305	(.02)
explained variance R^2	22%		23%		28%	
deviance	776.413		773.727		763.607	

*) significant at $\alpha<.10$ (two-tailed)
**) significant at $\alpha<.10$ (one-tailed)

The Form the HRD Program Takes

More than 56% of the 44 HRD programs studied were tailor-made, 25% were standard, while about 18% had another form, usually an adaptation of a standard program to a specific company situation. The data in Table 4 indicate that the form of the HRD program correlates negatively with perceived HRD effectiveness. When compared to standard and other kind of 'off-the-shelf' programs, tailor-made or customized programs result in a lower level of effectiveness (regression coefficient =. -.44, standard error = .10). This factor explains 7% more of the variation in the perceived HRD effectiveness score. No significant effects were found when interacting the variable 'form of HRD program' with the variable 'type of HRD program'. This means that the perceived effectiveness of tailor-made programs are less than other program forms, irrespective of whether they are geared to automation or social skills.

Table 4: *Effects (and standard errors) of the form of HRD programs on perceived HRD effectiveness(standard program as contrast group) (number of respondents= 440; number of companies = 44)*

	model 2		**model 3d**	
intercept	1.83	(.16)	2.11	(.18)
supervising managers	-.05	(.06)	-.04	(.06)
subordinates	.14	(.11)	.16	(.11)
HRD company representatives	-.03	(.12)	-.05	(.12)
strategic aligning within companies	.49	(.05)**	.49	(.04)**
strategic aligning between companies	.47	(.19)**	.48	(.16)**
form of HRD program:				
standard (contrastgroep)			-	-
tailor-made			-.44	(.10)**
another form			-.13	(.13)
unexplained variance				
between companies	.075	(.02)	.04	(.02)
within companies	.304	(.02)	.303	(.02)
explained variance R^2	22%		29%	
deviance	776.413		759.108	

**) significant at $\alpha < .10$ (one-tailed)

Conclusion and Discussion

The survey investigated to what degree respondents' perceptions on HRD effectiveness varied as a result of certain organization and HRD related characteristics as summarized in Table 1. No differences in perceived HRD effectiveness was observed for the factors size and structure of the organization, structure of the HRD function, and transfer conditions. Apart from a recent closed study into the effect of training in the workplace (Van der Klink, 1999), it is not known whether other research supports one or more of these findings. Van der Klink's study found that the transfer of training is largely explained by characteristics of participants, i.e. level of self-confidence and behavior after training. Workplace characteristics (support by the manager or pressure of work) had virtually no influence on the transfer of training. The study presented here has included such characteristics among the transfer conditions.

A link was found between other organization and HRD related factors and perceived HRD effectiveness. For instance, the effects of automation and social skills programs will vary whether shortcomings in actual performance of employees, departments or the entire company need to be resolved. A possible explanation may be that with social skills programs other kinds of knowledge, skills and attitudes are important than with automation programs. With the latter, the competences are, in most cases, very specific. It mainly concerns the learning of facts and procedures which are easy to apply to the tasks and functions of HRD participants. Competences that have to be learned in social skills programs are more general. They often concern communication, cooperation or managerial skills and attitudes, which are less easy to apply (Romiszowski, 1984).

The HRD climate correlates negatively with HRD effectiveness regardless of the type of HRD program. This is amazing, because it seems more logical that a positive HRD climate will enhance the transfer of the learning competences to the workplace. A possible explanation may be that the climate scale was based on perceptions of one respondent group (HRD company representatives). Their perceptions may be different from those of other groups of stakeholders. Managers may also vary concerning their attitude towards HRD. Some of them may fulfill an active and stimulating role, while others are likely to impede the learning and development of their employees employees (Tjepkema, ter Horst, & Mulder, 1999).

One of the findings of the survey was that HRD departments are less effective when they are part of a staff department, for instance, the company's personnel department. This is likely to do with the disadvantages that are ascribed to a line-staff organization everywhere. A staff position, away from the core processes of a company, will impede the department to pay full attention to problems and developments in working practices. This position favors a more theoretical and top-management approach.

The form the HRD program takes correlates negatively with perceived effectiveness. When compared to standard and other forms of HRD programs, tailor-made programs result in lower effectiveness. This partly explains why social skills programs prove to be less effective than automation programs (Wognum, 1999), since the former are often custom-made. However, no studies were found to support this finding. As far as is known, only the earlier-mentioned Van der Klink study points in this direction. Van der Klink puts the workplace as a powerful setting for training into perspective, largely due to the area of tension that exists between producing profitable work on the one hand and creating sufficient space for learning processes on the other. It is on-the-job training programs, in fact, that are typically tailormade. These results are somewhat paradoxal in nature, because it may expected that tailormade programs are most effective because of their adjustment to the specific corporate problem. A possible explanation may be that customized programs were not the right anwers for the company problems identified. Another possible explanation is that the programs were designed from the perspective of one group of employees, in most cases the HRD company representatives. Their viewpoint may be different from such other stakeholders as the HRD participants, their supervising managers, colleagues and subordinates. The so-called tailormade program then lacks the viewpoint of all persons involved, and is not entirely tailormade.

Considerations for HRD Practice and Further Research

Based on the findings, a closer link can be arranged between HRD structures and processes and those contextual characteristics which proved to influence HRD effectiveness. However, in future research, some of these factors need to be further considered when studying the effects of contextual factors on HRD effectiveness. One such factor is the HRD climate within a company. This factor should be measured not only among HRD representatives but also among other stakeholders in order to investigate its influence on HRD effectveness. Only then it will be clear whether HRD climate positively influences company HRD programs and thus supports the findings of, for instance, Kessels (1993) and Rouiller & Goldstein (1993). Further research into the impact of transfer conditions on HRD effectiveness is also recommended. It also seems unlikely that every contextual factor promotes HRD effectiveness separately (cf. Roth, 1992). Research into the internal consistency between organization and HRD related factors is therefore desirable.

In order to carry out further research a sufficient number of effective HRD training and learning programs need to be selected, which makes demands on HRD structures and processes in companies. For instance, one of the survey findings was that the HRD department is less effective when it is part of the personnel or other staff department. Two strategies may be used to achieve more effective HRD and other learning programs. The first is that HRD departments are placed more in management line. This however increases the distance from the company strategy. The second tactic is to improve the way in which the central department operates, drawing up a strategic mix aimed at centralized and decentralized control. Finally, in order to be effective, tailormade programs have to be designed not only from the viewpoint of individual HRD company representatives, but from the perspectives of all relevant stakeholders.

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Profile of Management Training Evaluation Studies with Control Group: 1983-1997

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This study quantitatively reviewed major program and design characteristics of 29 empirical management training evaluation studies. The study population was identified through a literature search guided by stated inclusion criteria. The results showed that progress has been made by training researchers in evaluating training outcomes of trainees' job performance and organization results, and in conducting rigorous cause-effect research in the work setting.

Keywords: Management Training, Training Evaluation, Review

Considering the significant amount of resources invested, it was not only reasonable but also ethical to develop effective training evaluation which provided evidence of the effectiveness of training intervention on job performance and organization results (Curry, 1992; Hilbert, Preskill & Russ-Eft, 1997). However, training evaluation studies never seemed to meet these expectations, but have often received severe criticism from professional reviewers (Campbell, 1971; Goldstein, 1980; Latham, 1988; Tannenbaum & Yukl, 1992; Wexley, 1984). Recently, Hilbert, et al. (1997) reviewed scholarly literature of training evaluation research of the last four decades, and concluded that "research on human resource development (HRD) evaluation has focused on a limited number of questions using only a few tools and methods", and "has failed to show HRD's contribution or value to organizations" (p. 109).

Two review articles (Campbell, et al., 1970; Clement, 1981) focused on published empirical evaluation studies on management training. The authors only selected empirical studies with some kind of experimental control--control group or both pre- and post-training measures. They tried to identify the study population and provided an overall picture of the evaluation studies on management training at that time. Campbell at el. (1970) included 73 studies published before 1970, and Clement (1981) had 26 that were published during the 1970s. However, the information from the studies reviewed was basically inadequate and led to no conclusion on which specific program or technique led to greater or lesser changes for a certain attitude or behavior measured by a certain criterion.

The major critical shortcomings of evaluation studies pointed out by Campbell, et al. (1970) included: (a) placed almost exclusive reliance of management development research on internal criteria, i.e., participants' reaction and learning, (b) examined a relatively small range of content and techniques of training, and used few well-researched measures, (c) lacked comparative studies and research studies incorporating measures of individual differences, and organization climate factors, (d) depended exclusively on the statistical significance as an indicator of judging success or failure of training. Clement (1981) used a similar format to Campbell, et al. for the purpose of comparison. He pessimistically stated that management training evaluation practices had not improved during the 1970s.

The relationship between managerial training and the acquisition of managerial skills was clearer after Burke and Day (1986) went beyond previous literature reviews by "quantitatively evaluating the degree to which the effectiveness of managerial training generalizes across settings for various training content areas, training methods, and outcome measures" (p. 243). They applied meta-analytical techniques to 70 empirical studies having at least one control or comparison group and published over a 32-year period (1951-1982). Although they found out that different methods of managerial training were, on the average, moderately effective in improving learning and job performance, "a great deal of empirical research on managerial training is needed before more conclusive statements can be made" (p. 232).

To provide historical data after 1982, this study depicted a profile of empirical management training evaluation studies published during a 15-year period of 1983 to 1997. The study addressed the following research questions:

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1. What is the general information of the empirical management training evaluation studies in terms of publication information, type of organization and trainee position?
2. What is the distribution of training content areas and teaching methods that are under evaluation?
3. What is the status of training program design and duration?
4. What is the distribution of criteria used for measuring training outcomes?
5. What are the research design characteristics of the studies reviewed?

Literature Review

To provide evidence of the effectiveness of management training, it is important to improve the quality of evaluation research studies. Major issues concerned by management training evaluation reviewers included measurement criteria of training outcomes, research design and experimental control, the scope of content and methods evaluated, program design and implementation, trainee and organization characteristics, and report of research results.

Measurement Criteria of Training Outcomes

Training outcomes had a manifold nature, so it was important to establish multiple criteria that reflected the various instructional objectives and organizational goals. Four criteria of evaluating training outcomes were most commonly accepted and widely used by training researchers and practitioners: reactions, learning, behavior and results (Goldstein, 1980; Hilbert, et al., 1997; Tannenbaum & Yukl, 1992). The measure of reaction was to find out what the participants thought and felt about the training. The measure of learning was to find out how much the participants increased their knowledge, improved their skills or changed their attitudes as a result of the training. The measure of behavior was to find out whether and in what extent participants used the knowledge and skills they had gained from training in their job roles. The measure of result was to discover the contribution of training to the business results and/or organizational goals (Kirkpatrick, 1959, 1994).

Campbell, et al. (1970) were disappointed with the fact that only 29% of their study population (73 studies) had employed external criteria (i.e., job performance and organizational results) to measure training outcomes. They also were disappointed with the narrow focus of what was measured in a particular criterion. Clement (1981) found that 58% of his study population (26 studies) had measured external outcomes. In Burke and Day's (1986) study population (70 studies), 39 studies (56%) measured trainees' behavior on the job, and 11 (16%) measured organizational results.

The ultimate purpose of training in organizations was to improve job performance and to fulfill organizational goals (Swanson, 1995), and there was no simple relationship between participants' reaction or learning and a change in performance (Campbell, et al., 1970; Dixon, 1990; Faerman & Ban, 1993; Holton, 1996; Tannenbaum & Yukl, 1992). So to demonstrate training effectiveness and to justify training investment, evaluation studies had to try harder to measure training outcomes against external criteria that measured changes in job performance and recognized contributions to organizational objectives.

Research Design and Experimental Control

Research design determined the rigor of the study. Goldstein (1980) reviewed literature related to design issues and methodologies appropriate to training research, especially research conducted in the work environment. The review discussed research design, random selection of subjects, random assignment to experiment, and use of a control group. Tannenbaum and Yukl (1992) discussed alternative research design prompted by difficulties of conducting experimental research in field settings.

Only studies using a control group, or at least both pre-training and post-training measures, could be expected to provide meaningful data regarding effectiveness of intervention. However, there were still many pre-1980 evaluation studies employed no control group and only post-training measures of outcomes (Clement, 1981). Bennett (1995) defined a variable of study design/methodological rigor to indicate the level of rigor or quality associated with each study included in his training effectiveness meta-analysis. He adapted the methodological rigor scale proposed by Terpstra, which included ratings on sampling strategy, sample size, presence of control group, random assignment to conditions, pretest/posttest design, and significance of test.

Training Contents and Methods

The 1970 review (Campbell, et al.) classified management training content into five content categories: General Management programs, General Human Relations programs, Problem-Solving and Decision-Making programs, T-group and Laboratory Education programs, and Specialty programs. The Burke and Day (1986) meta-analysis covered six content areas including General Management programs, Human Relations/Leadership programs, Self-Awareness programs, Problem-Solving/Decision-Making programs, Rater Training, and Motivation/Values Training programs. Blakely, et al. (1994) later expanded the content areas from six to nine by adding Technical Skills, Entrepreneurial Skills, and Ethical Decision-Making.

Campbell, et al. (1970) and Clement (1981) did not give a complete list of teaching techniques that studies covered although they stated that the range was small. Burke and Day (1986) identified seven single or combined teaching methods including lecture, lecture/group discussion, Leader Match, sensitivity training, Behavioral Modeling, lecture/group discussion with role playing or practice, and multiple techniques.

Program Design and Implementation

Positive training outcomes were expected from well-designed and well-administered training programs (Al-Ammar, 1994; Noe & Schmitt, 1986), that provided trainees with relevant and useful knowledge and skills. Training duration referred to the length of training time that the trainees received. It also limited the program design and selection of teaching techniques. Qualitative reviewers normally gave a brief summary of program design based on what was reported in the primary studies. There was a lack of overall picture and measurement of program design and implementation.

Bennett (1995) defined a variable of "implementation quality" as the extent to which a systematic needs assessment was conducted and reported in an evaluation study. The reasoning behind this was that a training program with systematic needs assessment would be better designed and implemented. He coded information about the organization, task and person analysis and converted it to an implementation quality "score". However, only seven percent of his study population reported some needs assessment activities.

Situational Variables

To improve job performance and organizational results, trainees had to apply the knowledge and skills learned to their job situation. Literature on transfer of training suggested that a supportive organizational climate influenced the transfer of training from the classroom to the job. The relevant literature also identified factors affecting transfer of training with empirical evidence (Hilbert, et al., 1997). However, the influence of transfer climate on training effectiveness was unknown. Both Campbell, et al. (1970) and Clement (1981) pointed out that few empirical studies--before 1970 (7%) and in the 1970s (4%)-- had attempted to investigate the effect of situational variables. Bennett (1995) reviewed 177 primary studies published in 1960-1993 in his meta-analysis on training effectiveness. No empirical data were available at that time regarding the influence of favorable environment on training effectiveness.

Report of Research Results

The exclusive dependence on statistical significance as the indicator to judge training success or failure led to the either-or approach of training evaluation (Campbell, et al., 1970). The conflicting results among studies left more unanswered questions than definitive statements concerning the effectiveness of managerial training (Burke & Day, 1986). A non-significant result did not necessarily mean "no training effect". The reviewers called for reporting the relative magnitude of the observed changes between experimental and control groups. To better accumulate research findings across primary studies, authors of empirical research should provide information on the degree of range restriction, criterion and predictor reliabilities, sample characteristics, and a thorough description of research methodology.

Training evaluation reviewers were also concerned with other issues which influenced training outcomes. Two of these were trainee characteristics (Al-Ammar, 1994; Campbell, et al., 1970; Tannenbaum & Yukl, 1992) and quality of training provider (Al-Ammar, 1994; Burke & Day, 1986).

Methodology

This study was part of a meta-analysis on management training effectiveness. Compared to a traditional narrative literature review, meta-analysis was a quantitative review of literature (Wolf, 1986). Meta-analysis summarized quantitatively many individual studies and was a secondary analysis of research data (Glass, et al., 1981). Major procedures related to this study included: (a) set up study inclusion criteria; (b) conducted literature search and procured primary studies; (c) coded study characteristics including program and research characteristics; (d) built a profile for management training evaluation studies.

Although all reviewers made subjective decisions on the selection of studies, a quantitative reviewer had to explicitly state his or her inclusion criteria, and to identify the study population accordingly. The primary studies included in this meta-analysis were empirical evaluation studies which: (a) examined effects of training programs for managerial personnel (including supervisor, manager, executive, administrator), (b) reported outcomes at the learning, behavior and/or organization result levels, (c) used experimental or quasi-experimental design, and reported experimental and control group sample size, (d) reported statistical data, such as group mean and standard deviation, or other inference statistics of *r, t, F,* to allow calculation of effect size, and (e) were published between 1983-1997. This study analyzed data of the whole study population.

The literature search started with the electronic databases of Educational Research Information Center [ERIC], PsycINFO, Dissertation Abstracts, and [ABI]. The key words used for search included: management training, management development, effectiveness, evaluation, experimental, and control group. Another source was references of major qualitative review articles on management training and training evaluation (e.g., Hilbert, et al., 1997; Latham, 1988; Tannenhaum & Yukl, 1992; Russ-Eft, 1997; Wexley, 1984). Three meta-analytical studies on training effectiveness (Bennett, 1995; Chen, 1994; Lai, 1996) provided additional studies.

A confirmatory rather than an exploratory approach (Hedges, et al., 1989) was employed to select characteristics of the primary studies. Based on literature review, the following characteristics were selected and coded from primary studies: publication information, organization setting, trainee position, training content, training method, training outcomes measurement criteria, training design and duration, and research design characteristics (design, sampling, assignment to treatment, sample size, control of pre-existing difference, significance of result, etc.).

Following Burke and Day's (1986) example of combining source of data (subjective vs. objective) with outcome criteria (learning, behavior and result), this study classified five measurement criteria for training outcomes: subjective learning (SL), objective learning (OL), subjective behavior (SB), subjective result (SR), and objective result (OR). The SL, OL, SB, and OR criteria were congruent with that defined by Burke and Day (1986, p. 233, 237). The subjective result (SR) criterion defined in this study was those measures of organization results perceived by respondents, not reported by hard record, e.g., subordinates' job satisfaction or commitment to the organization, and group effectiveness perceived by subordinates.

Management training programs often employed more than one training technique. Based on the information about training methods reported in the primary studies--lecture, discussion, case study, behavior-modeling, and computer-supported training--the present study classified the teaching techniques into three categories: "cognitive methods mainly", "behavioral methods mainly", and "combination of cognitive and behavioral methods". The study also coded the training skill/task into four categories: cognitive, interpersonal, psychomotor and multiple skills.

The present study also categorized training program design feature from the aspect of duration. The programs were classified as four types: short (less than one day), intensive (one to several days), intensive programs plus distributed sessions, regular programs lasting several weeks or months.

Another concept related to quantitative review was independent data point. To obtain the maximum amount of independent data available from primary studies while eliminating non-independent data, the unit of analysis was defined as one pair of independent experimental and control group under the measurement of one criterion. One unit of analysis generated one independent data point for the meta-analysis.

Results and Findings

The literature search guided by the inclusion criteria identified 47 studies. Thirty-one studies with adequate information were actually coded. After pre-heterogeneity test for outlier, 29 studies with 61 independent data points remained in the study population and corresponding data set.

Research Question 1: What is the general information of the empirical management training evaluation studies in terms of publication information, type of organization and trainee position?

In the study population, 18 studies (62%) were journal articles and 9 (31%) were doctoral dissertations. The others were a conference paper and a book. More primary studies (59%) on training evaluation were published in the 1980s than in the 1990s. The literature search found several meta-analysis on the effectiveness of management training published in the 90's: Chen's (1994) on cross-cultural program, Lai's (1996) on leadership training, and a meta-analysis within a Fortune 500 pharmaceutical company to accumulate evaluation results of 18 managerial and sales/technical training programs (Morrow, et al., 1997). This reflected a new research trend.

Among the 29 studies, 14 (48%) were conducted in business and industry for supervisors (6 of 14), managers (6 of 14), and executives (2 of 14). They generated data points for a total of 33 (54% of the data set), and 10, 21, and 2 for respective trainee position. The second biggest organization setting was education, which constituted 35% of the study population and 23% of the data set. Nine studies evaluated training effect of administrators (school principals, university department heads, and vice presidents), and one study evaluated training effect of managers in education organization. The other studies involved military, government, and hospital, and they accounted for 17% of the study population and 23% of the data set (Table 1 was omitted due to space limitation).

Research Question 2: What is the distribution of training content areas and teaching methods?

There were a total of six management training content areas covered by this study population. Human relations/leadership training was the biggest focus of training evaluation studies. Thirteen studies evaluated training programs with the objective of enhancing interpersonal skills and/or leadership behavior of the managerial personnel. It accounted for 45% of the study population. A total of 31 data points (51% of the data set) were generated from this category. The second large content area was the general management training (6 studies with 7 data points) followed by technical training (5 studies with 10 data points). They accounted for 38% of the study population and 28% of the data set. The remaining 17% included two studies of self-awareness program, two studies of problem-solving/decision-making program and one study of rater training program. They contributed 13 data points (21%) to the data set.

Regarding the training method, all studies used more than one training technique. By classifying them into three categories, the biggest group was the "combination of cognitive and behavioral methods". Twenty-six data points (43%) were generated from it. More than one-third (22 of 61) data points came from the "cognitive methods mainly" category, and the remaining 13 data points were in the "behavioral methods mainly" category. In order to compare training effects of different methods, two studies used all three types of methods, and a few others employed an alternative teaching method (see Table 3).

The training method used in a program was highly correlated with the nature of the skill/task that was taught. There was no psychomotor skill/task taught. Ten programs taught cognitive tasks and generated 21 data points (34% of the data set). Eight programs focused on interpersonal skills and resulted in 8 data points (13%). The majority of the studies (16 studies with 32 data points) evaluated programs that aimed at training managerial personnel with multiple skills. To train cognitive skills, 76% (16 of 21) of the programs were taught by cognitive methods, 14% (3 of 21) by behavioral methods, and 10% (2 of 21) by combined methods. To train interpersonal skills, 50% (4 of 8) of the programs were taught by behavioral methods, 25% (2 of 8) by cognitive methods, and the remaining 25% by combined methods. When the skills/tasks were multiple, the dominant method was the combination of cognitive and behavioral methods (69%). Other programs used either cognitive methods or behavioral methods (12% and 19% respectively).

Table 2 Distribution of Training Content Areas

Training Content	# of Study	% of Study Population	# of Data Point	% of Data set
Human relations/Leadership	13	45	31	51
General management	6	21	7	12
Technical training	5	17	10	16
Self-awareness program	2	7	2	3
Problem-solving/decision making	2	7	3	5
Rater training	1	3	8	13
Total	29	100	61	100

Table 3 Distribution of Training Methods

Training Method	# of Study	% of Study Population	# of Data Point	% of Data Set
Combination of cognitive and behavioral methods	17		26	43
Cognitive methods mainly	11		22	36
Behavioral methods mainly	6		13	21
Total	34 [a]		61	100

Notes. [a] Some studies employed more than one type of method.

Research Question 3: What is the status of program design and duration?

The largest category (41%) was the intensive program (one to several days). It fit the situation of busy working management personnel. Normally the short programs (i.e., only a couple of hours) were not long enough for teaching behavioral or multiple skills. The coded data showed that the 6 studies of short training program (about 20% of the study population) all taught cognitive skills/tasks. Five studies (17%) had a design of "intensive program plus distributed sessions". The distributed sessions were developmental process for trained managerial personnel in their job situations. The coded data showed that these programs all taught multiple skill/task, most had adequate training needs assessment, all had a strong favorable condition of transfer of training, and were well designed and well implemented (Table 4 was omitted)

Research Question 4: What is the distribution of criteria used for measuring training outcomes?

The data presented several facts. First, all studies used more than one level of criteria to evaluate training outcomes with only a few including reaction measurements. Second, 15 studies (52%) with 25 data points (41%) evaluated participants' learning. Only 7 studies (24%) were limited to internal criteria, i.e., not beyond the level of learning. Third, 17 studies (59%) with 24 data points (39%) evaluated trainees' job performance, of which 71% (17 out of 24 data points) employed some kind of job performance appraisal instruments to measure changes in job performance and had multiple measurements. Last, 8 studies (28%) with 12 data points (20%) evaluated organization results (see Table 5).

Table 5 Distribution of Training Outcomes Measurement Criteria

Measurement Criteria	# of Study	% of Study Population	# of Data Point	% of Data Set
Subjective learning (SL)	5		7	11.5
Objective learning (OL)	10		18	29.5
Subjective behavioral (SB)	17		24	39
Subjective results (SR)	3		5	8
Objective results (OR)	5		7	12
Total	40 [a]		61	100

Note. [a] One study used more than one criterion to measure outcomes.

Research Question 5: What are the research design characteristics of the studies reviewed?

Table 6 summarized coded data of research design characteristics. All 29 studies were conducted in the work setting. To find out the true cause-effect relationship between training intervention and outcomes, at least a quasi-experimental design was employed. Though it was difficult, 16 studies (55%) with 46 data points (75%) conducted true experimental research in the working setting, and seven studies (24%) used random sampling. All 29 studies had some kind of control on pre-existing differences between the experimental and control groups. Although it was difficult in conducting experimental research with managerial personnel, more than three-fourth of the studies had a sample size larger than 30.

Regarding the significance of the statistical test of primary studies, among the 61 independent data points, 26 (43%) were non-significant. Researchers did publish their non-significant results. Thus the worry about publication bias could be alleviated.

Table 6 Research Design Characteristics of Primary Studies

Research Design Characteristics	Classification	# of Study	% of Study Population	# of Data Point	% of Data Set
Research Design	quasi-experimental	13	45	15	25
	experimental	16	55	46	75
Random Sampling	not random sampling	22	76	42	69
	random sampling	7	24	19	31
Random Assignment	not random assignment	14	48	16	26
	random assignment	15	52	45	74
N>=30	N<30	7	24	11	18
	N>=30	22	76	50	82
Control of pre-existing difference	pre-test	17	59	33	54
	matched control group	7	24	11	18
	others	5	17	17	28
Significance of result	not significant			26	43
	significant			35	57

Conclusions and Recommendations

Based on the results and findings from data analysis, we can conclude that:

1. Training professionals have made efforts to conduct training evaluation beyond the reaction and learning levels to demonstrate positive training effects on job performance and organization results. Learning outcome is still and would continue to be a focus for evaluation since it is the direct objective of training. The situation of exclusive reliance of management development research on internal criteria has been changed. Depending mainly on performance appraisal instruments, about 59% of the primary studies produced multiple measures (by trainee, their supervisor, subordinates, and/or expert) of comprehensive job performance. Since performance appraisal has become a common practice in many organizations, the measurement of job behavior is easier than before for training researchers. However, the measure of organization results was still in a pre-matured stage. The indicators used in this category and the methods used to determine their magnitudes were highly diversified. About half of the studies that measured organization results were dropped by the present study due to inadequate data to calculate effect size.
2. Training evaluation researchers have made progress in research design as well during the past two decades. Quite a number of evaluation studies were conducted in the work setting with real managerial personnel rather than in college classrooms with students. Researchers exerted control on variables to design and conduct experimental or quasi-experimental research in order to find out true cause-effect relationships between training intervention and various outcomes.
3. In regard to the critique of Campbell, et al. (1970) about depending "exclusively on the statistical significance as an indicator of judging success or failure of training", there was little response from the researchers of primary studies. Only two primary studies in the study population of this study calculated effect size as an addition to normal statistical test results.

Even though progress has been made, many areas and aspects of management training evaluation still need more work. We recommend that:

1. More quantitative reviews should be conducted as complements to qualitative review. Meta-analysis can depict an overall picture of the study population identified by explicitly expressed inclusion criteria. With systematic coding procedure, a quantitative review normally observed more information from primary studies than a qualitative review. The more precise profile can give better insight. More important, only meta-analysis can accumulate quantitative data of training effectiveness across studies.
2. More high quality empirical studies should be conducted and report adequate information for secondary analysis. Many journal articles do not publish enough raw data, especially when the result is non-significant. In fact, it is much easier to calculate the effect size by author(s) of the primary study than by the meta-analyst. If for any reason the primary study does not give the effect size, the editor of the journal should at least publish the group means and their standard deviation.

3. The measurement of organization result outcome needs much work and research. The indicators and methods to determine the numerical value were highly diversified and some were not sensible, especially those that tried to show training contributions to the bottom-line. Before a meta-analysis can draw any reliable conclusions, some basic work needs to be done at the primary study level, e.g., to identify and prioritize the organization indicators which are most relevant to training, and to develop scientific methods to determine the magnitude of these indicators.
4. The "intensive program plus distributed sessions" design deserves more attention from training program designers. The trainees' practice of applying knowledge/skills and developmental process in the job position are designed and implemented as an integrated and formal part of the training program. Under professional trainer's supervision and mentoring, the previously informal on-the-job experience, conditional transfer of training and provisional mentoring are more likely to occur.

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Note: List of primary studies and omitted tables are available on request. Mailto: jzhang1@worldbank.org

An Evaluation of a Competency Based Training Program

Dale E. Thompson

The purpose of this study was to evaluate the Performance Based Teacher Education (PBTE) in Arkansas. PBTE is an approach to teacher training in which a person is required to demonstrate essential teaching skills in an actual training situation. The sample was 74 technical instructors at 11 postsecondary institutes in Arkansas. The competency categories ranked highest by the instructors were serving learners with special/exceptional needs, instructional planning, instructional evaluation and teaching adults.

Keywords: Training, Evaluation, Competency Based Teacher Education

Competency based education/training is a method of designing education/training to meet workplace needs. It is a training program that is individualized, focuses on outcomes and allows flexible pathways for accomplishing the outcomes. It makes clear what is to be achieved and the standards by which the achievements are to be measured (Kerka, 1998). Competency based education is an approach to education which makes sure that the competencies taught are those that are required on the job (Watson, 1990). Competency based training requires more planning and organization that traditional education. It requires an extensive process of identifying relevant skills needed in a particular job/position; organizing those skills so that learning activities can be developed; requiring more hands-on materials for training; delivering instruction with methods different from traditional teaching which requires trainers to be retrained for the program; and keeping more records which requires more time (Foyster, 1990). The goal of competency-based education/training is the transfer of learning to the actual work environment.

Many industries are providing worksite training to their employees. According to Lankard (1991) in the mid to late 1980's, employer sponsored training expenditures were approximately $40 billion. Currently employers spend $210 billion a year for training, while the government spends another $5 billion. (Billington, 1998). According to an Industry report in Training (Bill Communications, Inc., 1999) magazine, the overall training budget for industry (those with 100 or more employees) has risen by 24% since 1993. Sixty nine percent of their training budget goes to the training staff salaries. Even though training department's use a variety of training methods, 90 % use live-classroom programs and of all training done, 73% is classroom instruction with on site instructors.

With the amount of time and money invested by industry, it is clear that they take training seriously. However, all too often trainers are subject matter experts who are very knowledgeable of the content but have little or no experience about teaching (Charles & Clarke-Epstein, 1998). They are expected to deliver training as well as present information even though they have seldom received any formal instruction on how to teach/train (Lawson, 1998). This may be a major reason why many training programs do not help learners reach training objectives or apply what is learned to the real world (Ford, 1999). Ford (1999) also says that as much as half of current training is not transferred back to the job.

Purpose of the Study

The purpose of this study was to evaluate the Performance Based Teacher Education (PBTE) program used in Arkansas. It is a competency based educational program for individuals who plan to be instructors as well as those who are already instructors. The PBTE program was developed by the Center for Vocational Education located at the Ohio State University. It was funded and sponsored by the U.S. Office of Education and the National Institute of Education. PBTE is an approach to teacher training in which a person is required to demonstrate essential teaching skills in an actual training situation.

This research-based program uses 132 separate learning packages, called modules, which focus on 400 professional competencies found to be important to occupational specialties instructors. They are designed for trainers/instructors in the areas of health/medical, business/computers and trades as well as instructors teaching academic and literacy skills. Each learning packet was extensively field tested in staff development and teacher education programs at 18 institutions of higher education. The evaluations and field tests resulted in self-directed

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learning experiences that integrate theory and application. After completing the self-directed experiences, the instructors demonstrated the application of the theoretical information in an actual classroom setting. These modules were designed for use by individuals or groups. (Fardig, Norton, Hamilton, 1977) (Hamilton, Quinn, 1981)

In 1982 the Arkansas Department of Education, Vocational Technical Education Division, started a professional development program for all instructors hired into the states postsecondary vocational technical school system. The purpose of the program was to help them grow in three professional development areas, teaching skills, technical competencies and related professional activities. The PBTE program developed by the National Center for Research in Vocational Education addressed teaching skills (Andrew, 1987). All instructors in the state system were occupational specialist hired directly from industry to teach technical courses in areas of health/medical, business/computers, trades, academic, and literacy skills. Their students were training to enter industry jobs.

A university vocational teacher educator coordinated the Arkansas PBTE program. The primary responsibility of this teacher educator was to observe instructors demonstration of the knowledge, skills and attitudes required to perform a given teaching competency. The teaching competencies areas identified within the PBTE program were as follows:

Category A: program planning, development and evaluation
Category B: instructional planning
Category C: instructional execution
Category D: instructional evaluation
Category E: instructional management
Category F: guidance
Category G: school-community relations
Category H: student vocational organizations
Category I: professional role and development
Category J: coordination of cooperative education
Category K: implementing competency based education
Category L: serving learners with special/exceptional needs
Category M: assisting students in improving their basic skills
Category N: teaching adults

Method

Sample

All instructors in the state system were occupational specialist hired directly from industry to teach technical courses in areas of trades, literacy, business/computers, health/medical, as well as instructors teaching academic skills. All students in the program were training for industry jobs.

Instrumentation

The survey instrument included a complete list of all 132 PBTE modules/competencies. Using the official records of the University resource person, an individualized survey form was developed for each participant. The competencies completed by each instructor were highlighted in yellow on the survey form. Participation in the survey was voluntary and responses were kept confidential. Each instructor was asked to respond only to those competencies they had completed. They responded on a five point Likert type scale ranging from "very helpful", "helpful", "somewhat helpful", "slightly helpful" to "not helpful". Data were analyzed by giving the "very helpful" category a rating of 5 and decreasing to the value of 1 for the rating of "not helpful". In addition, a short demographic section was included which asked for area of instruction, number of years as an instructor, years in the occupation and level of formal education. The instrument was not tested for reliability or validity since it was just a complete listing of all teaching/training competencies, which made up the overall PBTE program.

Data Analysis

Data were analyzed for frequency and means using SPSS statistical computer package (Statistical Package for the Social Sciences, 1995). An analysis of variance was used to determine differences between instructor/trainers perceptions and their years of teaching experience, years of work experience in their occupational area, level of education and their teaching area.

Results

The survey was distributed to all technical instructors at all 11 postsecondary technical institutes in Arkansas who were actively involved in the PBTE program. Instructors who had not participated in the program within the past 2 years were not surveyed. One hundred thirty seven (137) surveys were distributed. Seventy-four were returned.

Twenty-nine of the respondents were trade instructors, 19 were literacy instructors, 6 were business/computer instructors, 5 were health/medical technology instructors and 11 were academic instructors. Four respondents did not indicate their teaching area. Their years of experience as an instructor ranged from 1 to 23 years, with the average being 6.4 years. The years of occupational experience ranged from 0 to 50 with the average at 11.5 years. None of the respondents has less than a high school diploma. Nineteen had a high school diploma, 11 had an associate degree, 24 had a bachelor's degree, and 16 had a master's degree. One indicated other, and 3 did not indicate a level of formal education.

The mean responses for the total group of participants were the highest, at 4.1, for the instructional planning competencies (B category). This was followed by three categories of competencies with a mean of 4.0. These were: instructional evaluation (D category); serving learners with special/exceptional needs (L category); and teaching adults (N category). (See Table one). The mean score for the total group was 3.8 for all 14-competency categories.

The trade instructors (those teaching mechanics, welding, electronics) rated the instructional planning competencies (B category) the highest with a mean of 4.4. The second highest rating for trade instructors was for the instructional evaluation competencies (D category) with a mean of 4.2. This was followed by the instructional execution competencies (C category) and the serving learners with special/exceptional needs (L category) both with a mean of 4.1 (See Table one). The mean responses by the trade instructors for all 14-competency categories were 3.8.

The literacy instructors (those teaching adult basic education) rated the teaching adults (N category) the highest with a mean of 4.0. The next highest rated by literacy instructors were the coordination of cooperative education competencies (J category) with a mean of 3.8. This was followed by the serving learners with special/exceptional needs competencies (L category) and the assisting students with improving their basic skill competencies (M category) both with a mean of 3.7 (see table one). The mean response by the literacy instructors for the total 14 competency categories was 2.8.

The business/computer instructors (those teaching computer information systems and accounting) rated the serving learners with special/exceptional needs competencies (L category) the highest with a mean of 4.3. This was followed by the implementing competency-based education competencies (K category) with a mean of 4.2. Next were the instructional evaluation competencies (D category), assisting students in improving their basic skills (M category) and the teaching adults competencies (N category) all with a mean of 3.7. (See table one). The business/computer instructors rated all 14 competencies categories at 3.6.

The health/medical instructors (those teaching nursing and emergency medical technology) rated the instructional evaluation competencies (D category) the highest with a mean of 4.9. Next highest for health/medical instructors were the instructional planning competencies (B category) with a mean of 4.7. This was followed by the coordination of cooperative education competencies (J category) with a mean of 4.6. Next were the instructional execution competencies (C category) with a mean of 4.5. (See table one). The mean response for the health/medical instructor for all 14-competency categories was 4.5.

The academic instructors (those teaching math and communications) rated two competency categories the highest with a mean of 4.4. Those were school-community relations (G category) and serving learners with special/exceptional needs (L category). The second highest were the teaching adults competencies (N category) with a mean of 4.3. This was followed by the instructional planning competencies (B category) and the guidance competencies (G category) both with a mean of 4.2. (See table one). The academic instructors had a mean score of 4.0 for all 14 areas of competency categories.

The results of the analysis of variance performed on the numbers of years of teaching experience, years of work experience in their occupational area, level of education did not reveal significance difference between groups. However the analysis of variance did reveal a significance difference in teaching area. The health/medical instructors had a significantly higher perception of the usefulness of competencies in seven of the categories. (A, B, C, D, E, J, K) The academic instructors had a significantly higher perception of the competencies in three of the categories (G-I-L) than all other participants. The remaining categories (F, H, M, N) reveled no significant differences by teaching areas.

Discussion

There were 4 competency categories, which were consistently ranked/rated the highest, in the helpful level. The category selected the highest was the L category which was- serving learners with special/exceptional needs. Specific competencies in this category consisted of identifying and diagnosing exceptional learners, planning instruction, providing appropriate instructional materials for exceptional learners, modifying learning environment for exceptional learners, using instructional techniques to meet needs of exceptional learners and assessing the progress of exceptional learners. It is quite possible that participants viewed themselves as being prepared to teach traditional students however they felt inadequate to teach special/exceptional students. Therefore they viewed these competencies as being helpful.

A second category consistently ranked high was the B category - instructional planning. Competencies in this area included determining needs and interest of student, developing performance objectives, developing a unit of instruction, developing a lesson plan and selecting instructional materials. It is possible that these groups of competencies were viewed as helpful since they are basic instructional skills, which are needed on a daily basis by instructors.

The next category of competencies frequently selected high was the D category - instructional evaluation. Competencies included were establishing student performance criteria, assessing student performance, determining student grades and evaluation instructional effectiveness. These competencies may have been regarded as helpful since instructors were concerned about grading student in a fair and impartial manner. These competencies help with establishing and conducting student evaluation.

The last category ranking consistently high was the N category- teaching adults. This area includes competencies such as determining adult training needs, planning instruction for adults, managing the adult instructional process, and evaluation the performance of adults. These competencies were rated high or helpful since many instructors felt they needed help with the over all instruction of adults due to their experiences with teaching in pedagogical rather than the andragogical areas.

Conclusions

Of the 14 competency categories in the Arkansas PBTE program, the instructors found that the areas that contributed the most to their teaching development were instructional planning, instructional evaluation, serving learners with special/exceptional needs and teaching adults. All of these categories were viewed as being helpful. The results of this study show that instructors found the modules to be a helpful form of training. This indicates that a competency based training program such as PBTE was widely accepted by instructors. PBTE offers a self-paced, individualized way for tradesmen to make the transition to instructors. This training will benefit them on their current job as well as in future endeavors.

Table 1

Mean Score by Instructional area and Competency Category

* Competency Category	**Instructional Area					
	Trade	Literacy	Business	Health	Academic	Total
A	3.8	3.5	3.7	4.1	4.0	3.8
B	4.4	3.1	3.8	4.7	4.2	4.1
C	4.1	2.8	3.0	4.5	3.9	3.7
D	4.2	3.1	3.9	4.9	4.0	4.0
E	3.7	2.8	3.3	3.6	3.5	3.4
F	3.9	3.2	3.7	3.9	4.2	3.7
G	3.9	3.5	3.4	3.9	4.4	3.8
H	3.2	3.1	3.6	3.3	3.8	3.3
I	3.7	3.3	3.0	3.8	3.9	3.6
J	3.0	3.8	2.4	4.6	4.0	3.4
K	3.9	3.2	4.2	4.2	3.4	3.7
L	4.1	3.7	4.3	4.4	4.4	4.0
M	3.8	3.7	3.9	3.6	3.9	3.7
N	4.0	4.0	3.9	4.0	4.3	4.0

*Competency Category Areas

Category A: program planning, development and evaluation
Category B: instructional planning
Category C: instructional execution
Category D: instructional evaluation
Category E: instructional management
Category F: guidance
Category G: school-community relations
Category H: student vocational organizations
Category I: professional role and development
Category J: coordination of cooperative education
Category K: implementing competency based education
Category L: serving learners with special/exceptional needs
Category M: assisting students in improving their basic skills
Category N: teaching adults

**Instructional Areas (those teaching the following areas)

Trade: welding, electronics, mechanics, automotive service, drafting, air conditioning and refrigeration, industrial maintenance, tool and dye technology, industrial processing
Literacy: adult basic education
Business/computers: computer information systems, accounting, computer applications, business education, office technology
Health/medical: nursing, medical assisting, surgical technology
Academic: math and communications
Total: all of the above

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Exploring the Convergence of Political and Managerial Cultures in the Dominican Republic: Implications for Management Development and Training

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This paper reports descriptive data from a survey of five work organizations in the Dominican Republic. Survey items included managerial styles, followership types, power bases at work, delegation of authority, and beliefs about authority at work. Data from this small-scale survey showed that some indicators of authoritarian behavior identified in the context of the country's political culture, are reflected in the relations manager-subordinate at work. Implications for management development and training are discussed. This is a work in progress.

Keywords: Management, Followership, Dominican Republic

Some authors suggest that, regarding human behavior at work, there are discernible differences between people in developed and less developed countries (Harrison, 1985; Kiggundu, 1989). Other scholars (Hofstede, 1980; Ronan & Shenkar, 1985) point to the nature and direction of these differences from culture to culture, in regards to dimensions such as power distance, individualism-collectivism, femininity-masculinity, uncertainty avoidance, and so forth. An aspect that has rarely been investigated is the influence a nation's political culture exerts on the values and practices of managers and employees at work. This paper report the descriptive findings of a small-scale survey that explored this convergence in the Dominican Republic, using a purposive sample of five (5) work organizations.

Many scholars attribute an inherent authoritarianism to leaders in Latin America (Fromm & Maccoby, 1970; Harrison, 1985; Kras, 1994; Lauterbach, 1966; Veliz, 1980), and in the Dominican Republic in particular (Brea, 1987; Clime, 1994; Duarte, Brea, Tejada, & Baez, 1995; Duarte, Brea, Tejada, Baez, 1996; Duarte, Brea, Tejada, 1998; Oviedo, 1987). The influence of authoritarianism in organizations is believed to help create followers/subordinates who are mostly obedient, submissive, acquiescent, dependent, and uncritical thinkers (Almond & Verba, 1963; Erasmus, 1968; Kras, 1994). Some scholars (Todaro, 1974; Tulchin, 1983) have voiced concerns about the validity of the generalizations made by some of the authors cited above. Some empirical evidence that seems to contradict such generalizations is also found in the literature (Booth & Seligson, 1984; Farris & Butterfield, 1972; Fuller, 1992; Gaitan, Davila, & Zarruk, 1985, Weis, 1994; etc.). Some hope is also voiced in accounts of those who have studied organizational behavior in Latin America recently (Montesino, 1998).

The portion of the survey reported here explored the extend to which the alleged authoritarian values permeating the political culture [as reported by Brea (1987), Clime (1994), Duarte, Brea, Tejada, & Baez (1995), Duarte, Brea, Tejada, Baez (1996), Duarte, Brea, Tejada (1998), Oviedo (1987)], manifest themselves in the context of the managerial culture in the Dominican Republic. As it pertains to this paper, the researcher wanted to know: a) what is the predominant managerial style in the context of the five (5) work organizations in the Dominican Republic that agreed to participate in the survey? b) what is the predominant followership type encountered in these five different work environments? c)What is the power base of leaders/followers in these organizations? and d) what are the implications of these findings for management development and training? The author posed other research questions that were not discussed here. This paper only reports descriptive data from selected survey items related to managerial styles, followership types, power bases at work, delegation of authority, and beliefs about authority at work. Several other items (not discussed here) were included in the survey.

Methodology

A purposive sample of five (5) work organizations was selected for the survey. The author convinced the organizations to participate in the survey, as long as they remain anonymous. The taxonomy developed by Jorgensen, Hafsi, & Kiggundu (1986) was used to select the work organizations. Their taxonomy includes four

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types of work organizations typically found in developing countries: a) governmental and state-owned enterprises, b) entrepreneurial family-owned firm, c) the industrial cluster, and d) the multinational subsidiary. Corresponding to this taxonomy, four work organizations were selected for the survey. A fifth organization was added by the author (a non-governmental organization-NGO) to complete the purposive sample.

A survey was administered to the employees of the five work organizations. The questionnaire was translated to Spanish and pilot-tested in winter 1998. The survey took place during the summer of 1998 in the Dominican Republic; funded by a Faculty Research Grant from Indiana University-Purdue University at Fort Wayne (IPFW). The questionnaire contains items generated by the author and others derived from several models developed by organizational-behavior researchers. The items related to "managerial styles" were adapted from Hofstede (1980) and Schaupp (1978). Survey questions addressing "power bases" were derived from a survey conducted by Tannembaum, Rozgonyi, and others (1986) in Mexico, Bulgaria, Romania, Hungary, Germany, and Ireland, based on French & Raven's model (1959). The author was authorized to translate to Spanish these items by the Institute for Social Research at The University of Michigan. The items related to "delegation at work" were adapted from Tannenbaum's delegation levels (1958). Followership types were derived from Kelley's followership model (1988). Some of the items addressing beliefs about authority at work were generated by the author and others were adapted from Duarte, Brea, Tejada, & Baez (1995).

The five work organizations that were surveyed are: a) two industrial companies [45 respondents out of a combined payroll of 232 employees], b) one branch of a governmental bank [17 respondents out of 30 employees], c) one multinational subsidiary [7 respondents out of 13 employees], and d) a non-governmental organization [32 respondents out of 51 employees]. One hundred and twenty six (126) employees responded the survey.

Discussion of Results

Managerial Styles

The subjects were given four (4) paragraphs describing four different ways in which managers and supervisors make decisions and allow the involvement of subordinates in the decision-making process. Adapted from Hofstede's model (1980) of "power distance" and the survey used by Schaupp (1978) in Argentina, Canada, France, Germany, India, Japan, The Netherlands, and the United Kingdom, the four managerial styles given to the subjects were the following:

Manager 1	*Usually makes his/her decisions promptly and communicates them to his/her subordinates clearly and firmly. Expects them to carry out the decisions loyally and without raising difficulties.*
Manager 2	*Usually makes his/her decisions promptly, but, before going ahead, tries to explain them fully to his/her subordinates. Gives them the reasons for the decisions and answer whatever questions they may have.*
Manager 3	*Usually consults with his/her subordinates before he/she reaches his/her decisions. Listens to their advice, considers it, and them announces his/her decision. He/she then expects all to work loyally to implement it whether or not it is in accordance with the advice they gave.*
Manager 4	*Usually calls a meeting of his/her subordinates when there is an important decision to be made. Puts the problem before the group and invites discussion. Accepts the majority viewpoint as the decision.*

Then the subjects were asked seven (7) questions requiring them to identify their boss' style, their own, and those of others around them, from the four (4) options described above. The scale was from 1 to 4, reflecting the continuum of subordinate's involvement in decision making allowed from managers, which is explicit in the description of the four (4) managerial styles described in the previous paragraph. Table 1 shows the descriptive results.. As shown below, the respondents of this survey perceive leaders at work, Dominicans in general, and Latin Americans in general as allowing little subordinate's participation in decision making. The data show similar tendencies found by Duarte, Brea, Tejada, & Baez (1995), Duarte, Brea, Tejada, & Baez (1996), and Duarte, Brea, & Tejada (1998) in their national studies of political culture in the country. That is, taken as a whole, the 126 employees of the five work organizations surveyed in this purposive sample concurred that their bosses show somewhat authoritarian styles of management at work (mean of 2.58), very much the same way that Dominicans in general perceive their leaders in the political arena. Likewise, the employees reported that they would prefer to work under less authoritarian bosses (3.27) and considered that participative management is more effective at work (3.35). The tendency became a lot more pessimistic when the subjects were asked to compare the majority of managers in work organizations in the country (mean of 1.67), Dominicans in general (mean of 1.57), and other Latin American citizens they know (mean of 1.83).

A one-sample test of means showed that the difference between "perceived management style" (question #2, mean=2.58) and "preferred management style" (question #1, mean=3.27) was statistically significant. This test shows further the disconnection between the way the respondents are currently managed and the way they would prefer to be managed.

Table 1
Managerial Styles

Question		Resp.	Mean	Std.Dev.
1)	Under the authority of which of the managers described above would you prefer to work?	126	3.27	1.08
2)	Which of them best describe your current boss?	126	2.58	1.24
3)	Which one best describe most of the managers and supervisors in your organization?	126	2.24	1.22
4)	Which one best describe most of the work leaders in the Dominican Republic?	125	1.67	0.97
5)	Which one best describe the Dominicans in general	126	1.57	0.97
6)	Which one best describe other Latin American citizens you know?	125	1.83	1.06
7)	Which one you believe would be more effective at work?	126	3.35	1.02

Followership Types

The subjects again were given five (5) paragraphs describing five different followership types, derived from Kelley's model (1988). Kelley's model is based on two dimensions of followership: a) the extent to which employees show independence and critical thinking, and b) their passivity/activity in organizational affairs.

Employee 1	*Is dependent, passive, and uncritical thinker. He/she does as he/she is told.*
Employee 2	*Is active in the organization, but also dependent and uncritical thinker. He/she reinforces leader's idea and thinking enthusiastically without challenge or criticism.*
Employee 3	*Is cautious, takes little risk. Non disruptive, tests the waters before asserting himself/herself in word or deed.*
Employee 4	*Is independent, critical thinker, but passive. Somehow, sometime, something turned him/her off.*
Employee 5	*Is independent, critical thinker, and active in the organization. Tends to think for himself/herself and carry out his/her duties with assertiveness.*

The subjects were asked seven (7) questions requiring them to identify their boss' type, their own, and those of others around them, from the five options given. The scale was from 1 to 5, reflecting the continuum of activism, independence, and critical thinking exhibited by employees, which is explicit in the description of the five (5) followership types described in the paragraph above. Table 2 shows the results.

The data below show that the respondents to this survey perceived most of their peers (mean of 2.47), most of the employees in the country (mean of 2.27), the Dominicans in general (mean of 2.39), and other Latin American citizens they know (mean of 2.46), as exhibiting little activism, independence, and critical thinking abilities at work. By the same token, their description of the followership type of those they manage (mean of 2.37) is a lot different from the type of follower they consider to be more effective at work (mean of 3.97). A one-sample test of means revealed that the difference between "perceived followership type" (question #1, mean=2.37) and "preferred followership type" (question #7, mean=3.97) was statistically significant. The results of this test further show the disconnection between the way the respondents see their own employees as followers and the type of employees they prefer to work with as subordinates.

Table 2
Followership at Work

Question		Respondents	Mean	Std.Dv.
1)	Which one best describe most of the employees you manage?	126	2.37	1.34
2)	Which of them best describe your current boss?	126	3.29	1.62
3)	Which one best describe the majority of your peers?	126	2.47	1.27
4)	Which one best describe most of the employees in the Dominican Republic?	126	2.27	1.15
5)	Which one best describe the Dominicans in general	126	2.39	1.13
6)	Which one best describe other Latin American citizens you know?	126	2.46	1.39
7)	Which one you believe would be more effective at work?	126	3.97	1.51

Delegation Levels

The respondents were asked three questions regarding their delegation levels: a) how their immediate supervisor delegates authority at work, b) how they themselves delegate, and c) how they would like to be delegated to. The response categories included a continuum of subordinate's authority in the delegation process from 1 to 4, adapted from Tannenbaum's delegation levels (1958). The four levels are:

Level 1 *Authority retained by supervisor.*
Level 2 *Supervisor's approval obtained before employee takes action.*
Level 3 *Employee acts and then reports to supervisor.*
Level 4 *Employee has complete authority delegated.*

Table 3 shows the results of the three questions, as follows:

Table 3
Delegation Levels

Question	Resp.	Mean	Std.dev.
1) Which of them best describes you when you delegate?	126	2.52	1.12
2) Which of them best describes your current boss?	126	2.67	1.03
3) How would you prefer to be delegated to?	126	2.97	1.07

As shown above, the subjects provided very similar answers to the three questions related to delegation at work. The way they see themselves, their bosses, and the way they prefer to be delegated to reveal a limited level of subordinate authority in the delegation process. A slight difference is observed between the "perceived" delegation level on the part of their bosses (question #2, mean 2.67) and their "preferred" delegation level (question #3, mean 2.97).

Power Bases at Work

The power bases used by Tannembaum, Rozgonyi, and others (1986) plus additional ones were operationalized as statements with which the respondents expressed their degree of agreement from 1 (none) to 5 (a lot). Only the statements were given to the subjects. The names of the power bases are reported here to help the reader understand the meaning of each statement. The question was: *when you do what your immediate supervisor requests you to do on the job, why do you do it*? The italicized statements below were given in the order they appear here, for the respondent to choose their degree of agreement. The results are as follows:

Table 4
Power Bases at Work

Power base	Statement in the Questionnaire	Mean	St.Dev.
Expert power	*I respect his/her competence and judgement.*	3.21	1.70
Reward power	*He/she can give special help and benefits.*	1.90	1.60
Referent power	*He/she is a nice person.*	2.29	1.73
Coercive power	*He/she can penalize or otherwise disadvantage me.*	1.33	1.28
Position power	*Strict hierarchy is needed for the organization to operate properly.*	3.24	1.73
Information power	*He/she provides the information I need to work.*	2.91	1.74
Persuasive power	*He/she convinces others using logical arguments and factual evidence.*	2.55	1.83
Charismatic power	*His/her charisma (enthusiasm and optimism) attracts me.*	2.17	1.77

Table 4 shows how much the idea of hierarchy is rooted in the minds of the respondents. The legitimacy of position power stands out as one of the main reasons why employees do the job they are told to do by their immediate supervisor (mean of 3.24). The second power base is the technical competence of the immediate supervisor (3.21), followed by information power (mean of 2.91) and persuasive power (mean of 2.55).

Beliefs About Authority at Work

Eleven (11) statements regarding the manager/subordinate relations at work were given to the subjects; instructing them to check all of those with which they agree. One hundred and twenty six subjects answered this question. Table 5 lists the statements and the number of subjects that showed agreement with each statement.

Table 5 reverals tendencies that practitioners have speculated about: a) the persistence of authoritarian values that percolate from the political to the managerial culture, b) a decline in the subjects' identification with verbal expressions that perpetuate autocratic practices at work, and c) an underlying support for more participation at work, very similar to the underlying support for democratic institutions in the political realm, as found by Duarte, Brea, Tejada, & Baez (1996) and Duarte, Brea, & Tejada (1998). The subtle impact of the values and practices of the political culture on managerial philosophy and practice is reflected in the high number of respondents (49.2%) who checked item #2 (*I prefer more order at work, even if there is less democracy*). This percentage is proportionately similar to the one found by Duarte, Brea, Tejada, & Baez (1995) in their national survey of registered voters. They found that 66.5% of their respondents agreed with this statement regarding national politics. By the same token, the statement that best resembles paternalistic tendencies (*A good manager is like a good parent, who solves all your problems*) was checked by one third of the respondents in this small-scale survey of employees of five (5) work organizations. Duarte et.al (1995) found that 76.4% of their respondents agreed with this statement.

The decline in the subjects' identification with verbal expressions that perpetuate autocratic practices at work is evident in the low percentages of respondents who checked items #6,7,10, and 11; and the high percentage that checked item #1 (78.6%). An underlying support for more participatory management practices is reflected in the choice of items #4 and 9. The fact that 81.7% checked item #4 (*Under the right circumstances, people are fully capable of working productively and accepting responsibilities*) and only 15.1% checked item #9 (*Most people are lazy and irresponsible and will work hard only when forced to do so*), reveals a strong identification with the values of McGregor's (1960) *theory Y*, as opposed to *theory X*. These two divergent views about human behavior at work stress autocratic values (theory x) and more participatory values (theory Y). This survey also found tendencies that contradict the findings of Duarte et.al (1995). For instance, Duarte et. al (1995) found that 50.4% of their respondents agreed with statement #7 (*A strong leader would do more for the organization than all procedures and systems in place*), while only 21.4% did so in this survey.

Table 5
Beliefs About Authority at Work

	Statement	Subjects	Percent
1)	*At work, it does not matter whether my boss is male or female*	99	78.6
2)	*I prefer more order at work, even if there is less democracy*	62	49.2
3)	*At work, I prefer to be lead by a man*	26	20.6
4)	*Under the right circumstances, people are fully capable of working productively and accepting responsibilities*	103	81.7
5)	*At work, I prefer to be lead by a woman*	5	4.0
6)	*The boss is always right*	13	10.3
7)	*A strong leader would do more for the organization than all procedures and systems in place*	27	21.4
8)	*A good manager is like a good parent, who solves all your problems*	42	33.3
9)	*Most people are lazy and irresponsible and will work hard only when forced to do so*	19	15.1
10)	*Strict discipline and punishing management is the best way to achieve results at work*	6	4.8
11)	*The Dominicans at work lose respect for managers who consult their employees in making decisions*	16	12.7

Concluding Comments

Descriptive data from this small-scale survey showed that some indicators of authoritarian behavior, identified in the context of the country's political culture, are reflected in relations manager-subordinate at work. The respondents to this survey perceived leaders at work, Dominicans in general, and other Latin American citizens they know as allowing little subordinate's participation in decision making. Regarding followership, the respondents perceived most of their peers, most of the employees in the country, and other Latin American citizens they know as exhibiting little activism, independence, and critical thinking at work. The way the respondents see themselves, their bosses, and the way they prefer to be delegated to reveal a limited level of subordinate authority in the delegation process. This survey also shows how deeply rooted is the concept of organizational hierarchy in the minds of the respondents. On the other hand, the subjects also reported that they would prefer to work under less authoritarian leadership and showed a clear decline in their identification with verbal expressions that perpetuate autocratic practices at work.

This survey shows clearly the convergence of a political culture caught between authoritarianism and democracy, and a managerial culture that emphasizes autocratic practices in a context that prefers higher levels of subordinate's participation at work. It also raises wider research questions. For instance, some questions for further research could be: a) if the political culture influences the managerial culture (as suggested by the data presented here), could changes in that political culture (let's say "toward democratization of politics") influence changes in the managerial culture? b) can changes in the managerial culture influence upwardly the wider political culture? What role can initiatives aimed at developing managerial capacity in the country play in these changes?

Although this survey is limited to the five (5) work organizations studied, the similarity of its findings with other national studies suggests that efforts aimed at developing internal managerial capacity in the country should take into account these underlying autocratic tendencies in the workforce, as well as the underlying support for more participative management practices revealed in this survey. The author's conclusion is that management development and training efforts should focus primarily on challenging deep rooted beliefs and values about authority at work, and then address the development of surface competencies (managerial skills, knowledge and abilities) typically included in the content of management education and training. In summary, the scope and methodology for management development and training should focus on the benefits of participation in decision making, independent thought and action, critical thinking, and, above all, self-direction at work.

This survey had several limitations worth mentioning. First of all, its findings only apply to the five (5) work organizations where the study was conducted. They cannot be generalized to the entire country. References to nationswide studies were made in this paper only with the purpose of stressing similarities between political and work behaviors. Secondly, the portion reported here is just a discussion of the descriptive data from several survey items. This is still a work in progress. The author will analyze and report the findings related to the reciprocity leader/follower as it pertains to the use of control in the organization, opportunities for participation given to subordinates, and many other issues addressed in the survey. Thirdly, no background variables were incorporated to the analysis thus far, due to page limitations by AHRD (not even the five work organizations were compared/contrasted here). Finally, more qualitative data should be collected in the future to better understand the complex issues involved in the relation superior/subordinate at work.

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The Types of Verbal Interactions and Impact of Gender in Corporate Training Sessions

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This study describes verbal interactions in 13 selected training sessions across the United States using the INTERSECT Instrument. More than two-thirds of the interactions were found to be acceptance, the mere acknowledgment of a response by the instructor, with remediation accounting for about 21% and praise, 11%. Criticism occurred only 4 times, or .18%. Gender equity was found to exist in all training sessions.

Keywords: Gender Equity, Verbal Interactions, Praise

The average full-time female worker earns approximately 75 cents for every $1.00 that the average male worker earns. Although this may be a flawed statistic because it ignores education and type of work, over 36 years after the passage of the Equal Pay Act, women are still a long way from workplace equality (Murphy, 1999, p. D8). It is hard to believe that women cannot earn what men do simply because they are female, but even in today's diverse workplace, old prejudices die hard (Krotz, 1999, p. 44).

Are the classrooms of the nation partly to blame for perpetuating a lower status for women in the business world? Male dominance of the mixed classroom, from nursery school to university lecture hall, has been well established by research spanning more than forty years (AAUW, 1992, p. 118; Whyte, 1984, p. 75). The issue is broader than the unequal number of teacher contacts with male and female students; it also includes the inequitable content of teacher comments. Teacher remarks can be vague and superficial, or they can be precise and penetrating. Helpful teacher comments provide students with insights into the strengths and weaknesses of their answers, and teacher reactions not only affect student learning but may also influence self-esteem (AAUW, 1992, p. 119).

Review of Related Literature

Dr. Myra Pollack Sadker realized that her educational experiences were different from those of her classmate and husband, Dr. David Sadker, and this led to the publishing of *Sexism in School and Society* (Frazier & Sadker, 1973). The Sadkers and others developed the INTERSECT (Interactions for Sex Equity in Classroom Teaching) Instrument to code interactions in classrooms where direct or active instruction was taking place (Sadker, Bauchner, Sadker, & Hergert, 1981).

The Sadkers, in conducting a study of more than 100 elementary and middle school classrooms, identified four types of teacher comments: praise, acceptance, remediation, and criticism. *Praise* included explicitly positive comments, such as "Excellent!" "Good!" "You've done a superb job of integrating your research material." *Acceptance* included teacher comments that implied student performance was accurate and appropriate, but the comments were not stated strongly enough to be categorized as praise. Examples include: "O.K.," "uh-huh," "I see," or simply teacher silence. *Remediation* included probing questions or teacher comments that encouraged or cued a more accurate or acceptable student response. Remediation implied a deficiency in student performance and suggested corrective action. Examples include: "Check your addition," "What led you to that conclusion?" *Criticism* referred to definitely negative comments, such as telling the student that an answer was incorrect (Sadker & Sadker, 1985, p. 31).

After extensive statistical analyses, the Sadkers painted the following picture of classroom life. Of the four evaluative reactions, criticism occurred least often and in the fewest classrooms, or in only 5% of teacher-student interactions. Praise accounted for 11% of classroom interactions, but in one-fourth of the classrooms, the teacher never praised student answers. Remediation occurred in 99% of the classrooms and accounted for one-third of all classroom interactions. Acceptance was the most frequently used teacher

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response and accounted for more than half of all classroom interactions—more than praise, remediation, and criticism combined. This led the Sadkers to call it the "O.K. Classroom" (Sadker & Sadker, 1985, p. 360).

The Sadkers certainly did not question the value of accepting student comments. Sometimes it is the most appropriate type of comment a teacher can make, and it is very valuable when dealing with affective issues. However, they were concerned with the overuse of acceptance in interactions that focused on academic content. Research on teacher effectiveness has suggested that specific feedback is important for student achievement. John Goodlad (cited in Sadker & Sadker, 1985) wrote that, "learning appears to be enhanced when students understand what is expected of them, get recognition for their work, learn quickly about their errors, and receive guidance in improving their performances" (p. 360). If the teacher says, "Uh-huh," in response to a student's answer, what is the student to conclude? Was it a good answer, or was it barely passable? Was the teacher listening at all? The fact that over half of teacher responses fell into the bland and uninformative category of acceptance led the Sadkers "to wonder whether the O.K. Classroom is all that O.K.?" (1985, p. 361). Their observations also revealed that, when teachers initiated interactions, they continued to interact with children of the same gender as themselves, but it was more pronounced for male students. The Sadkers' data suggested that "classroom interactions between teachers and students were short on both quality and equality" (p. 361).

A study of 182 secondary vocational education classes in Kentucky showed that males not only received more interactions of acceptance and remediation, but also more praise and criticism. Both intellectual and behavioral exchanges were characterized by this pattern, which led the researcher to conclude that gender bias in Kentucky secondary vocational education programs was extensive and consistent with results of previous studies in a variety of educational settings (Smith, 1992, p. 191).

Cranston (cited in Simon, 1998, p. 13) wrote that learning is usually facilitated by active participation, and that interaction and discussion can be effective ways of being involved in the process. Cohen and Lotan (cited in Caruthers, 1996) stated, "Differences in classroom interactions can lead to differences in learning outcomes—that is, those who talk more, learn more" (p. 3).

Simon (1998) at the community college level found that gender was not a significant factor in either total interactions or in teacher-initiated interactions. However, there were significant differences in student-initiated interactions. Male instructors received significantly more interactions from female students, and female instructors received significantly more interactions from male students. This was in contrast to studies showing that male students initiated more interactions overall and particularly with male instructors. In two other studies where female students were found to initiate a significant number of interactions, it was with female instructors (Canada & Pringle, and Krupnick, cited in Simon, 1998, p. 127).

Extensive review of the literature revealed only one study in which adult learners in a human resource development setting have been evaluated in terms of their classroom participation. A study by Rocheford (1990) of a real estate sales training course found that males and females participated equally (p.6).

Research Questions

Do the human resource development classrooms of the business world give differential treatment to trainees according to gender? Who talks more—men or woman? Does the gender of the trainer make any difference in who talks more? What is the distribution of each type of contact (praise, acceptance, remediation, or criticism) to the total number of interactions? What is the actual percentage of classroom interactions for each gender?

Significance of the Study

The training and development of the human resources of the United States are important as never before. U.S. businesses must have highly skilled, well-trained workers to remain competitive in the world economy. Schools and universities will do their part, but the need is so great that the main responsibility for training and human resource development will have to be assumed by business (Gaudet & Vincent, 1993, p. 138). Training has been called the country's "shadow education system" (1993 Industry Report, 1993,

p. 29) because employers spend billions of dollars each year to train and educate their workers. Corporate education is arguably the largest provider of adult education in the nation, with an estimated one-third of the labor force receiving some type of formal training each year, accounting for billions of hours spent in company classrooms (Leach, 1989, pp. 325-326). According to Naisbitt and Aburdene (1985), training and education programs within U.S. business are so vast and extensive that in effect they represent an alternative system to the nation's public and private schools, colleges and universities (p. 166). Businesses are being forced to *make* rather than *buy* their supply of productive workers and have become involved in an arena that once belonged solely to education (Everett & Drapeau, 1994, p. 136).

At first corporations were not happy with their new role as educator, but they soon found that their investment in training really paid off. As former U.S. Commissioner of Education, Ernest Boyer, wrote, "It would be ironic if significant new insights about how we learn would come, not from the academy, but from industry and business" (Naisbitt & Aburdene, 1985, p. 178).

"Equitable teaching is a component of effective teaching" (Simon, 1998, p. 6). According to a study by the AAUW (cited in Smith, 1992), girls enter school approximately equal to boys in measured ability, but after twelve years they trail boys in critical areas such as mathematics achievement and self-esteem. This report also cited factors regarding the status of women after education, such as job segregation and lower salaries, to indicate a long-term bias against females (p. 184).

This study was designed to assist training professionals, human resource development managers, academicians, and other training providers in adding "precision and vitality to their interactions" (Smith, 1992, p. 190) with trainees by making them aware of the possibility of disproportional distribution of verbal interactions by gender, as well as by the patterns of verbal interaction—praise, acceptance, remediation, and criticism.

Implications for Practitioners

There is no comprehensive system for educating trainers. If classroom "teachers clearly need to know more about research of classroom interactions" (Sadker & Sadker, 1985, p. 361), then it certainly is true that trainers, many of whom have had little or no education in teaching, need to be conscious of their interactions with trainees. This study could help make trainers aware that all interactions should contain "both quality and equality" (Sadker & Sadker, 1985, p. 361).

Implications for Training Providers

In addition, the results of this study could assist faculty, staff, and administrators in colleges and universities; professional organizations; and other individuals who provide training to trainers. The findings of the study may be used in developing courses, seminars, workshops, and self-study materials to meet the needs of training professionals.

Research Design and Methodology

This study sought to determine: (1) whether one gender received a disproportionate amount of verbal interactions between trainers and trainees in human resource development training sessions; (2) the major form of feedback that trainees received from the trainer—praise, acceptance, criticism, or remediation; and (3) whether one gender received a disproportionate amount of helpful teacher comments, such as praise.

Instrument

The instrument used in this study to code training class verbal interactions was the INTERSECT (Interactions for Sex Equity in Classroom Teaching) Observation System, developed by Sadker, Bauchner, Sadker, and Hergert (1981). The INTERSECT Instrument was developed through the following procedures: (1) a comprehensive review of interaction instruments and research in general; (2) a comprehensive review of interaction instruments and research that pertained particularly to gender equity in classrooms; (3) field testing of the instrument in 36 fourth-, sixth-, and eighth-grade classrooms (Sadker, Bauchner, Sadker, & Hergert, 1981, p. 1).

The instrument was designed to measure teacher-student interactions and identify inequity and bias in the manner teachers interact with students. Since it was discovered that a typical classroom teacher involved in instruction has 1,000 verbal interactions per day with students (an average of two per minute), the rapidity of the interactions required that there be as few coding options as possible, while retaining the ability to capture the nature of the interactions (Smith, 1992, p. 187).

The instrument has been used in hundred of classrooms, including the college level. Reliability was set at 85% for inter-rater reliability agreement. Two raters looking at videotapes and at classrooms had to reach a minimum agreement of 85% for their results to be accepted. "Validity is construct validity—we are measuring what we say we are measuring, teaching distribution of attention by gender. It is what we count. The notion is teachers give more attention to students whom they interact with" (D. Sadker, personal communication, December 27, 1999).

The INTERSECT form contains three sections. The subject of the training session and the gender mix of the class, together with a diagram of the seating arrangement, are recorded in the first section. The second section includes categories on which the researcher records the type of interaction as it takes place, the gender of the trainee, and whether the interaction is initiated by the trainer or by the trainee. Although the instrument allows for measuring classroom content in the intellectual, conduct, and appearance categories, in this study, only interactions in the intellectual classification were observed and recorded. The third section of the instrument may be used to record "tone-setting" incidents, activities which are likely to encourage or inhibit gender equity in classroom interactions (Sadker, Bauchner, Sadker, & Hergert, 1981, p. 34).

Observer Reliability

This researcher observed the following process to become rater reliable on the INTERSECT Instrument: (1) Studied the *Observer's Manual for INTERSECT* and (2) attended a pilot study training session to become familiar with using the instrument.

Inter-Rater Reliability

For inter-rater reliability, audiotape was used to record the interactions between trainers and trainees (an average of three hours per session). A second doctoral student randomly selected six of the audiotapes. From these six tapes, the researcher and the other student listened to a total of 200 interactions and recorded the types of interactions. There was agreement on 92% of the items.

Target Population

The target population was persons of both genders involved in business and industry training sessions in various U.S. cities.

Sample

The sample for this study was drawn from 13 training sessions offered by a major HRD consulting firm. Eight of these sessions were held in the Midwest, two in the East, two in the South, and one in the West. While the content of the 13 sessions varied, much of the emphasis was on leadership and management development. Intact classes were used. Specific training sessions were observed based upon availability during the time period of this study, the agreement of the instructor to allow observation even though instructors were not informed about the purpose of the study, and the ability of the researcher to travel to training sites.

It is estimated that the trainees ranged in age from 25 to 50 years. They were employed as HRD managers and supervisors. Most were college graduates, several with advanced degrees, while others were working to complete master's and doctoral degrees. Many had several years of experience in the HRD field. Fifty-six (43%) of the trainees were male, and 73 (57%), female. Of the trainees, 116 (90%) were white; 6 (4%), Black; 4 (3%), Native American; 2 (2%), Asian; and 1 (1%), Hispanic. The number of trainees per session ranged from 4 to 18, for an average of 10. In all but one session, the minority gender composition was no less than 20%.

Ten of the trainers were male; six were female. All were white. Three of the sessions observed were team-taught. Two of the teams were comprised of one man and one woman, and the third, of two women.

Gathering the Data

The data were gathered by observation of trainers and trainees at training sessions using the INTERSECT form. Training programs ran from two to five days, although the researcher attended only one day of each seminar. Some programs were held at large hotels and conference centers, while others took place at company headquarters.

The classes were intentionally kept small so there could be more interaction. In addition to listening to lectures, where the trainers responded to answers, comments, and questions, students sometimes worked alone. Other times they worked in pairs, triads, and other small groups, which allowed the participants to interact and learn from each other's experiences. No observations were recorded during these times.

Findings

The findings are related to interaction feedback, interaction equitability, and trainer/trainee gender interaction effect.

Interaction Feedback

The total number of interactions between trainers and trainees in each class was calculated and divided into type of contact (praise, acceptance, remediation, and criticism). The ratio of each type of contact to the total was then computed, which represents the distributions of interactions as displayed in Table 1.

Table 1
Distribution of Interactions

Interaction Type	No.	%
Praise	232	10.63
Acceptance	1,496	68.56
Remediation	450	20.63
Criticism	4	.18
Total	2,182	100.00

As noted in the table, acceptance was, by far, the largest type of feedback, followed by remediation and praise. Criticism almost never occurred.

Interaction Equitability

Sadker and Sadker (cited in Smith, 1989 pp. 27-29) devised a measure known as the Coefficient of Distribution (COD) to adjust for the uneven distribution of males and females in a classroom and to reflect the distribution of classroom interactions based on actual classroom membership. This measure is determined by first counting the total number of students in the class and determining the number of males and females present. The total number of males and the total number of females are divided by the total number of students, which yields the expected percentage of interactions for each gender.

The total number of interactions in each class is then broken down by gender and ratios computed. The actual percentage of interactions per gender less the expected percentage is the coefficient of distribution. If it is a positive percentage, that gender is getting more attention than expected. Applying the rule of COD + 15% as educationally significant, the COD for the totals of both genders, - 4% for males and + 4% for females, indicated that a very even distribution of interactions occurred overall.

The equitability of interactions was also investigated through a series of t-tests based on the mean number of interactions per student per class. As indicated in Table 2, all p values were greater than .05; therefore, there were no significant differences between trainee gender in any category of interaction.

Table 2
Interactions per Trainee Per Class by Trainee Gender

Type of Interaction	Gender	No. of Interactions	Mean	t Value	P
Praise	Male	99	1.21		
	Female	133	1.48	.91	.38
Acceptance	Male	618	9.24		
	Female	878	11.61	1.36	.20
Remediation	Male	173	5.60		
	Female	278	4.24	.83	.42
Criticism	Male	2	.01		
	Female	2	.07	1.30	.22

Trainer/Trainee Gender Interaction Effect

Main and interaction effects based on the mean number of interactions per male and female trainee with male and female trainers were investigated with a two-way analysis of variance, as displayed in Table 3. Since all p values were greater than .05, there were no significant main or interaction effects.

Table 3
Analysis of Variance—Total Interaction[a] Gender of Trainer/Gender of Trainee

					Main Effects		Interaction Effect	
	Gender	No. Trainees[b]	Mean[c]	SD	F	P	F	P
Instructor	Male	106	14.32	9.60				
	Female	43	16.91	17.73				
	Total	149	15.29	13.18	.37	.55		
							.46	.51
Student	Male	70	14.13	13.00				
	Female	79	16.45	13.37				
	Total	149	15.29	13.19	.14	.71		

[a] N = 2,182
[b] Includes 20 trainees who were team-taught
[c] Mean number of total interactions per student

Discussion

The results of this study contradict previous gender research in schools but are similar to the results of the study by Rocheford (1990) of a sales training course in real estate. Rocheford also discovered there was no significant difference in interaction between the two genders.

The level of participation by females in the training sessions observed, as compared to the studies in the school, might be attributed to motivation of the women to succeed in their jobs. Also, a subjective observation was that women who are well educated seemed to exude self-confidence. In their introductions at the beginning of each class, many women spoke of having completed or being in the process of earning their master's or doctoral degrees. In addition, as they mature, women may lose their self-consciousness about being with members of the opposite gender, which teenagers and younger adults often express. Rocheford (1990) gave another reason for women's level of participation:

> In a professional training environment as opposed to an academic classroom setting, there are several correct answers. Participants are required to make judgment calls based on both the course content and their life experiences. This may reinforce a wider variety of learning styles than the traditional academic setting and give women greater confidence in their responses. (p. 7)

All of these suggestions, however, are hypotheses that have not been proven in this study. More study is needed about explanations before any of these guesses can be confirmed.

Conclusions

The following conclusions from this sample of business world classrooms can be drawn from the findings of this study:

1. There was gender equity in the verbal classroom interactions during instruction.
2. By far, acceptance, the mere acknowledgment of a trainee's response, was the major form of verbal interaction, followed by remediation and praise. Criticism almost never occurred.
3. There is no interaction effect between trainer and trainee based on gender.

Implications for Further Study

This study, together with Rocheford's research, indicated there might be equal participation of men and women in the classrooms of the business world, although further research would need to be done to determine if such is the case.

Would trainees learn more if there were more praise in their interactions with trainers?

Does seating arrangement make any difference in how much a person talks?

The data analysis in this study was limited to trainer-trainee interactions in the intellectual realm. Analysis of non-verbal interactions might also be valuable.

Since peer-to-peer interaction was an important part of these training sessions, an analysis of these interactions might also be valuable.

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Developing Human Potential through Anthropocentric Work Organization

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Despite widespread recognition of the need to develop human potential at work, little attention has been paid to the relationship between work organization and HRD. A typology of forms of work organization is developed in terms of task complexity, task variety, task discretion and management control. Four workplaces are then studied which correspond with the four ideal-typical forms of work organization to explore the extent to which needs and opportunities for HRD are affected by work organization, the relationship with job satisfaction and the separate effects of skill and autonomy. The cases suggest that work organization affects HRD and job satisfaction, and the most positive effects are associated with greater skill and autonomy.

Keywords: Skill, Autonomy, Anthropocentric

There is a growing literature citing evidence that HRD strategies play a crucial role in improving performance and sustaining competitive advantage (Arthur, 1994; Carter and Lumsden, 1988; Cutcher-Gershenfeld, 1991; Huselid, 1995; MacDuffie, 1995; Winterton and Winterton, 1999). The rediscovery of the importance of the 'people factor' has also become prevalent in new management thinking, which emphasises the need to harness the skills and energies of the whole workforce and to develop motivation, commitment and leadership at all levels (Bennis, 1999; Dessler, 1999; O'Shaughnessy, 1999). Since the pioneering work of Hackman and Oldham (1976; 1980), however, there have been few attempts to get behind the rhetoric that 'people are our greatest asset' (Sisson, 1994: 7) and the cliché 'with every pair of hands a brain comes free' (Cannell, 1993: 64), to explore how these can be translated into designing meaningful work that allows people to develop and to *use* their brains.

This paper contributes to the debate by investigating HRD practice in four workplaces exhibiting different forms of work organization. A theoretical model is outlined for categorising different approaches to work organization in terms of the level of skill and degree of autonomy. Three research questions are then articulated concerning the relationship between HRD and different forms of work organization, and a methodology for investigating these empirically is outlined. Four workplaces, selected in terms of their work organization characteristics, were investigated and the findings are discussed before drawing together the conclusions of the cross-case analysis and highlighting the significance of the research for advances in HRD theory and practice.

Theoretical framework

The way that work is organized and tasks assigned to individuals are major determinants of how individuals experience work. According to Hackman and Oldham (1976; 1980), provided the organizational environment is satisfactory (in terms of hygiene factors), individuals having a strong attachment to accomplishment and growth will be motivated to superior performance, experience higher job satisfaction and exhibit higher retention (lower absence and turnover) where work is designed around five core dimensions. When the five core dimensions (skill variety, task identity, task significance, autonomy and feedback) are fulfilled, individuals experience three psychological states (meaningfulness of work, responsibility for work outcomes and knowledge of results of work activities) that are associated with improvements in motivation, performance and QWL measures. Hackman and Oldham (1975; 1980) demonstrated how these core dimensions could be stimulated through a series of 'implementing concepts' (combining tasks, forming natural work units, establishing client relationships, vertical loading and opening feedback channels) and provided a job diagnostic survey to measure both the core dimensions and the critical psychological states.

Skill and autonomy are defining characteristics of the structure of work organization and the core dimensions that are most dependent upon HRD. In the Hackman and Oldham model, 'skill variety' conflates the variety of *tasks* undertaken with the range of *skills* deployed, while 'autonomy' is interpreted as the opportunity to decide how to do

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the work. Further conceptualization of these two core dimensions is therefore necessary to explore the relationship between work organization and HRD. The degrees of task complexity and task variety affect the skills required, while the extent of task discretion and management control delimit the autonomy allowed. The alternatives can be explored by combining pairs of these dimensions.

Figure 1 Task variety, task complexity and skill

	task complexity	
task variety	low	high
high	multi-tasked	multi-skilled
low	Taylorist	craft

In the case of skills, the two dimensions are task complexity and task variety, which are combined in Figure 1. Each dimension is a continuum, but for the sake of theoretical abstraction, each is posited as a dichotomous 'high' and 'low'. The combination of low task variety with low task complexity is typified by Taylorist work organization, where work is minutely sub-divided into tasks involving a small range of relatively narrow skills. The work of mass production operatives is often organized in this way, and is complemented by craft work involving specialist (low variety) and highly complex tasks, such as those undertaken by fitters (mechanics) and electricians. Where there is little task complexity but more task variety, whether through frequent product changes or job rotation within a Taylorist production system, this can be viewed as multi-tasked. By contrast, high task variety with high task complexity is characterised as multi-skilled, exemplified by an 'electro-mechanical' craft worker, who undertakes the hybrid work of both fitter and electrician.

Figure 2 Task discretion, management control and autonomy

	task discretion	
management control	low	high
low	routinized	autonomous
high	monitored	responsible

In relation to autonomy, the two dimensions are task discretion and management control, which are combined in Figure 2. Again each dimension is a continuum, but for the sake of theoretical abstraction each is posited as a dichotomy, 'high' and 'low'. The combination of low task discretion with high management control is described as 'monitored', whereas low task discretion combined with low management control is characterised as 'routinized'. Either is consistent with Taylorist work organization, and the degree of management control may reflect the extent to which errors have seruious implications: where mistakes have only a minor impact, there is little to be gained from investing excessive management control. High task discretion combined with high management control is characterised as 'responsible', whereas high task discretion combined with low management control represents 'autonomous' work.

The extremes of the skill and autonomy typologies developed in Figures 1 and 2, then, are Taylorist *v.* multi-skilled and monitored *v.* autonomous. Again, these should be seen as the extremes of continua rather than the dichotomous variables that have been created in order to develop the theoretical argument. By combining these two dimensions, as in Figure 3, four ideal-typical forms of work organization can be distinguished.

A Taylorist skill strategy combined with monitored control creates a form of work organization that still represents the prevailing mode of production in manufacturing industries, and appears to be replicated in some emerging industries, such as call centres. Individuals perform a narrow range of tasks requiring only shallow skills, their work is closely monitored and individuals have little task discretion. Such separation of conception and execution, where managers are supposed to do the thinking and operatives carry out their instuctions, is the very antithesis of developing human resources. Since the purpose of such job design is to intensify the rate of production, such work organization is characterised as 'intensive'.

Figure 3 A typology of work organization

	control/discretion	
variety/complexity	monitored	autonomous
multi-skilled	holistic	anthropocentric
Taylorist	intensive	teamwork

The limitations of traditional work organization have long been recognised in Japan. For example, Konsuke Matsushita commented in 1979:

> We are going to win and the industrial West is going to lose out: there is nothing much you can do about it, because the reasons for your failure are within yourselves. Your firms are built on the Taylor model: even worse: so are your heads. With your bosses doing the thinking while the workers wield the screwdrivers, you're convinced deep down that this is the right way to run a business. For you, the essence of management is getting the ideas out of the heads of the bosses into the hands of labour. We are beyond the Taylor model: business, we know, is now so complex and difficult, the survival of firms so hazardous in an environment increasingly, unpredictably, competitive and fraught with danger, that their continued existence depends on the day-to-day mobilization of every ounce of intelligence. (Molander and Winterton, 1994: 147).

These limitations became apparent later in the UK, and in recent years there have been signs of a departure from traditional 'intensive' work organization (Kelleher, 1996), stimulated by discussion of 'new forms of work' (Piore and Sabel, 1984; Kern and Schuman, 1987). The most significant restructuring of work organization appears to have been underpinned by innovative vocational training arrangements based on social partnership between employers and trade unions (Winterton and Winterton, 1994).

Several companies, especially in the chemicals sector, re-designed work in ways that demanded broader and deeper skills, such as diagnostic and analytical skills to trouble shoot and keep equipment running. To do this, workers need a conceptual understanding of the process which goes beyond a daily operational working knowledge, and a broader range of skills and competences. This approach is described as 'holistic', in contrast with the fragmented skills and knowledge associated with Taylorist work. Another solution has been to devolve a degree of decision-making and control to work groups, so that while tasks remain fragmented, the full range of operations is performed by a team, who need a broader range of skills and have more control over their pace of work. This approach, characterised as 'teamworking', has been especially prevalent in the clothing sector. Relatively few examples exist of companies that have combined extensive multi-skilling with autonomy, but *a priori* reasoning would suggest that this should provide the sort of work organization conducive to self-actualization and growth, according to motivation theories. Such work organization is therefore described as 'anthropocentric' or human-centred since it is assumed to be most suited to satisfying human needs.

Research questions

Different types of work organization demand different degrees of investment in HRD, and different forms of work organization constrain the opportunities for experiential development. To move beyond such generalization, however, requires the formulation of more precise research questions. Three questions were articulated for empirical investigation:

- To what extent, and in what ways, are the needs, and opportunities, for HRD influenced by different forms of work organization?
- To what extent is job satisfaction associated with forms of work organization that involve developing human potential?
- To what extent can the effects of skill and autonomy be distinguished and which has more influence on job satisfaction and HRD needs and opportunities?

Methodology

To investigate the above research questions, a case study approach was adopted because the work was intended to be both exploratory and illustrative. The research is exploratory in that it investigates the concepts of skill and autonomy in actual work settings and illustrative in that it offers examples from lead sites in four different industrial sectors. A further reason for adopting the case study method is the recognition of the importance of contextual factors, since any study of skill 'requires a detailed examination of work in context' (Crompton and Jones, 1988: 80). The choice of cases is justified in terms of 'focused sampling', entailing 'the selective study of particular persons, groups or institutions, or of particular relationships, processes or interactions that are expected to offer especially illuminating examples' (Hakim, 1987: 141).

The workplaces were identified from information obtained in four earlier studies. The first involved an analysis of changing work relations in the coal industry as a result of new technology (Winterton, 1985). The second explored the introduction of new forms of work organization in the clothing industry (Barlow and Winterton, 1996). These two studies were part of long-running projects on industrial restructuring in the two sectors (Winterton and Winterton, 1998; Taplin and Winterton, 1996; 1997). The third study looked at trade union involvement in vocational training arrangements in six workplaces (Winterton and Winterton, 1994), while the fourth examined the business benefits of competence-based management development in sixteen workplaces (Winterton and Winterton, 1996). These last two studies were undertaken on behalf of the European Commission and the UK Government, respectively.

From this earlier work, four workplaces were selected which appeared to correspond most closely with the four cells in the work organization typology in Figure 3:

- A coal mine in North Yorkshire where considerable job restructuring had taken place in order to promote functional flexibility and where there were daily struggles over work intensification (*intensive*).
- A clothing manufacturing plant in Staffordshire where team working had been introduced to raise job satisfaction and improve labour retention (*team work*).
- A chemicals plant in West Yorkshire where operatives had undergone training and development both to undertake more skilled tasks and to gain more holistic understanding of the chemical processes (*holistic*).
- An engineering factory in Bedfordshire where quality control had been develolved to self-directed teams of operatives who had become multi-skilled (*anthropocentric*).

In each workplace, semi-structured interviews were conducted with senior and line managers, trade union officials and a selection of workers. To ensure comparability and to maximise the scope for analytical generalization, a standardised case study protocol was designed (Yin, 1988), which included the interview schedules, written evidence to be examined and an outline structure for the case reports

Results and findings

The results of the four case studies are reported separately below and cross-case conclusions presented in the next section.

Coal mining

The colliery studied is in Selby, the most technologically advanced mine complex in the world, with the application of computerised monitoring and control, heavy duty technology and retreat mining methods throughout. Work restructuring centred on functional flexibility, designed to increase the return on capital investment through fuller utilisation of assets. Union branch officials viewed the objectives more as reducing manpower and intensifying work in order to increase profitability. While the development of new technologies was acknowledged as a factor facilitating job restructuring, the defeat of the 1984-85 miners' strike (Winterton and Winterton, 1989) was seen as more significant and the major changes occurred after 1992, when 'the back of the union was broken' at the pit following geological problems. The colliery workforce was reduced from 450 to 197 and sub-contractors were brought in to replace development workers.

Extensive functional flexibility had been introduced: surface fitters did welding jobs and electro-mechanical craft workers had replaced electricians and fitters. Process workers also displayed extensive flexible working, with loco drivers undertaking methane boring and surface workers deployed generally to a whole range of tasks. Craft workers in face teams were involved in driving the shearer, 'chocking' (moving the face supports) and 'putting packs on' (building timber supports at the gate ends). Face workers undertake nuisance breakdown repairs: 'every miner now carries a spanner'.

The job restructuring was associated with very little increase in task complexity for most workers because new technologies were designed to reduce dependence on skilled workers (Winterton, 1985). Fitters, for example, are 'now doing very little fitting ... the work tends to involve module replacement'. A proportion of electricians had acquired new conceptual skills in connection with remote control and monitoring equipment. Task variety increased significantly: 'most people now have more jobs to do'. Managers told union officials that their objective is 'to multiskill everybody', but for the most part, greater task flexibility has not involved the acquisition of additional skills so much as using skills individuals had already acquired.

In general, the new work organization is more concerned with increasing task flexibility than with the acquisition of additional skills, so no significant HRD initiatives are involved. Nevertheless, task flexibility is extensive and there is evidence of substantial job restructuring. The attraction of the job restructuring to management is in terms of reducing manpower and therefore total labour costs, and in increasing machine utilisation. The benefits to individual workers seem minimal in that the skills are largely non-transferable, there is no additional remuneration for increased task flexibility, the pace of work is intensified and there is widespread evidence of job dissatisfaction.

Clothing

The enterprise, part of a principal clothing contract supplier, made ladies' trousers for a high-street chain store. In the workforce of 250 at the site studied, all the machinists were female and approximately half were under 18 years of age. The company was experiencing difficulties both in attracting and retaining labour, and labour turnover was running at 90 per cent, compared with the industry average of 27 per cent (Taplin and Winterton, 1999).

New work organization centred on teamworking in the assembly stage was designed to improve labour retention. Teamworking replaced the traditional progressive bundle system, where lines of machines are arranged in the order of operations and bundles of sub-assemblies are passed along the line, with machinists specialising in one operation. With teamworking, each team of eight workers was assigned a U-shaped bank of stand-up sewing machines covering the full range of operations, from overlocking to buttonholing. The machinery and tasks generally remained the same, but the system required machinists to be able to do a wider range of tasks. The initial aim was to have all machinists competent in 50 per cent of the 12-14 tasks required for an individual style, but an average machinist is able to perform three operations, and tends to concentrate on one. One of the biggest problems with the progressive bundle system was line balancing. Team working was designed to aid line balancing so that machinists could move to perform operations where the need was greatest to keep the operation running smoothly.

Task variety increased, and all machinists were able to do more operations than before. Task complexity also increased, firstly, because it takes an individual longer to learn several operations, and secondly because line balancing involves all team members in understanding the whole process. Operational skill requirements have not changed significantly, but conceptual skill needs have changed quite considerably. On the traditional system a machinist 'did not have to think at all, but just undertake the same simple task or operation repeatedly'. In the new system, by making teams responsible for their own line balancing, machinists need to employ a much higher level of conceptual skills.

Management cited several positive outcomes of the new working arrangements. The attempts to reduce labour turnover were very successful. In the first year the labour turnover was down from 90 per cent to 25-28 per cent (in line with the industry norm) and absenteeism fell from 10 per cent to 6-7 per cent. Nevertheless, teamworking offered the advantages of higher earnings and less work tedium. The machinists are earning more, but under payment by results, they are also working harder. All of the machinists interviewed preferred the new system because it was less boring than the traditional lines, and while they also felt that they had to work harder, none wanted to return to traditional work organization.

The new work organization necessitated the acquisition of a broader range of skills, and making teams responsible for line balancing significantly increased the conceptual skills required, but it was the relative autonomy of teamworking rather than the acquisition of additional skills which had this effect.

Chemicals

The company comprises the fine chemicals division of one of the UK's leading transnational chemicals groups, having several plants in the UK and elsewhere in Europe. The total workforce, excluding contractors, in the fine chemicals division is 830, of whom 57 per cent are blue-collar workers. Labour turnover is low, under 2.5 per cent, and the average length of service is about 15 years. Management is committed to HRD, claiming there is a 'direct link between training and performance improvement which leads to enhanced profitability.'

Blue-collar workers are 100 per cent unionized and the Union initially brought forward a draft flexibility agreement for discussion. Management responded positively, and the resulting agreement established a framework 'to harmonise the conditions of employment of all employees and improve the profitability and competitiveness of the company, by changing the working practices and skills of employees.' The flexibility agreement was also designed to improve the quality of working life in terms of job enhancement and increased autonomy.

For process operatives, work organization was altered both in terms of increased task variety, through additional maintenance tasks, and increased task complexity: 'more is expected of the shop floor operative now in terms of knowledge of the process'. The restructuring of work organization therefore necessitated HRD initiatives to fascilitate the acquisition of new operational and analytical skills in both process operators and craft workers. The new skills were acquired through a range of in-house structured training programmes jointly developed by management and Union. The training philosophy outlined in the flexibility agreement centred on enhancing skills and requiring employees to accept flexibility and mobility within their normal jobs.

The main benefit of multi-skilling, especially of process operatives, was in reduced plant down-time. Other benefits cited by management include the 'removal of demarcation mentality'. Union representatives thought workers had gained not only in terms of higher earnings but also in increased job satisfaction and control over their immediate work environment. Process workers confirmed the 'satisfaction of not standing around waiting for a fitter to arrive and effect a simple repair'.

Engineering

The company, formerly part of a large UK engineering group, is a specialist manufacturer of aeroplane components, with a total workforce of 320 at a single factory. When the company moved to modular manufacture, multi-skilling and autonomous work groups were introduced, and these were supported by extensive HRD initiatives.

At the centre of the multi-skilling initiative was a 'Four Star Plan' which rewarded people for the acquisition of lateral skills and to facilitate movement between work cells. All maintenance workers were trained to be multi-skilled electro-mechanics, and in addition many have specialist skills associated with the company's particular requirements. Production workers were trained to undertake routine maintenance repairs. Job restructuring did not generally increase task complexity, since tasks are a function of the range of products, but it substantially increased task variety, depending upon an individual's star rating. A related initiative, 'Delegated Authority', established autonomous work groups, removing inspectors over a four-year period and making workers responsible for their own quality assurance.

Union collaboration in the organization of Four Star Plan was crucial to its success and working groups comprising shop stewards, workers, supervisors and managers in each department jointly identified the core skills of each work cell. The Four Star Plan was eventually abandoned because it had become apparent that there were problems in rewarding flexibility and not rewarding individuals who concentrate on developing depth of skills. Also, the extent to which individuals were able to develop new skills depended on the areas in which they worked. Broader operational skills have been developed and Delegated Authority, has increased the conceptual skills substantially: 'individuals need to be able to identify whether something is right when inspecting their own work'.

The impact of these initiatives on profitability and productivity is difficult to measure, but there was anecdotal evidence of improved quality, and absenteeism fell from 6 per cent to 2.7 per cent. The direct workers appear to have gained most from multi-skilling, in terms of increased task variety and responsibility as well as the opportunity to deploy more conceptual skills.

In this case, multi-skilling entails the acquisition of significant new (lateral) operational skills, and, in conjunction with Delegated Authority, the introduction of higher conceptual skills. Increased task flexibility is a key objective of the changes. There are evident benefits to the workforce both in terms of additional remuneration and increased job satisfaction deriving from the task variety and responsible autonomy built into the jobs.

Conclusions

Just as these case studies are exploratory and illustrative, so the conclusions that can be drawn are equally exploratory and tentative. Considerable care was taken to select workplaces that closely matched the characteristics associated with the four ideal-typical forms of work organization outlined in the typology. Even so, there are limits to the generalization that is possible from a study based on a single case of each type and the conclusions are advanced with this caveat made explicit. Further empirical work is needed to explore whether these findings are replicated in other settings, especially in workplaces that are less easily placed in the four cells of the typology.

Returning to the questions posed above.

- To what extent, and in what ways, are the needs, and opportunities, for HRD influenced by different forms of work organization?

Work re-organization in the engineering and chemicals cases has necessitated and facilitated the acquisition of significant new skills, both lateral (mainly operational) and vertical (mainly conceptual). In the clothing case, both task complexity and task variety increased with the introduction of teamworking, the first demanding new conceptual skills but the second not requiring significant lateral skills. In the coal mining case, the emphasis is on task flexibility and the fuller utilisation of existing skills, rather than the acquisition of new skills. The engineering and chemicals cases required substantial additional on-the-job training to equip individuals with the necessary skills to cope with the demands of increased task variety and task complexity. Training in the clothing case was less extensive, while in coal there was no additional training, with the exception of those craftworkers involved in maintaining the remote control and monitoring systems.

- To what extent is job satisfaction associated with forms of work organization that involve developing human potential?

The four cases show significant variation in the extent of job satisfaction and the extent to which workers appear to share the benefits of new forms of work organization. The engineering case showed the clearest linking of remuneration to the acquisition of new competences, although the additional remuneration was more significant in absolute terms in the chemicals case, and, in relative terms in the clothing case. All three cases also showed increased job satisfaction associated with greater autonomy. By contrast, in the coal case, there was no additional remuneration for accepting greater flexibility and no reported improvements in job satisfaction.

- To what extent can the effects of skill and autonomy be distinguished and which has more influence on job satisfaction and HRD needs and opportunities?

In these four cases, the effects of increasing skill and autonomy can be distinguished and it appears that raising skill demands has a greater impact upon job satisfaction than increasing autonomy, since the chemical workers appeared to have gained more from job restructuring than the clothing workers. However, increased autonomy did also lead to improved job satisfaction, as evidenced by reduced absence and turnover, and without doubt, the combination of multi-skilling and autonomous work, as in the engineering case, had most impact on reported job satisfaction. Both multi-skilling and autonomous work were also associated with HRD needs and opportunities, especially when combined.

The four cases can be considered to range along a continuum from coal, through clothing and chemicals, to engineering. Autonomy and skills increase along this continuum, and with these so does the extent of HRD and job satisfaction. Further research is necessary to explore whether these findings are replicated and to assess the separate contributions of the component parts of the autonomy and skill dimensions. Such research will require the identification of workplaces that conform with the intermediate cells in the typologies of Figures 1 and 2, as well as further cases of the ideal-typical forms of work organization already considered, for replication.

These preliminary findings are nonetheless relevant for HRD in three respects. First, they show that work organization has an effect on HRD initiatives and that HRD is both facilitated and necessitated by forms of work organization that require greater skills and autonomy. Any departure from traditional 'intensive' work organization will demand more HRD and provide more opportunities for development, but the combination of multi-skilling and autonomous work, 'anthropocentric' work organization, offers most opportunity for developing human potential. Second, these results confirm the association, long assumed, between HRD and job satisfaction: developing people at work enhances their experience of work and results in tangible benefits in reported satisfaction and behavioural indicators such as absence and turnover. Third, if anthropocentric work organization is the key to flexibility with security, then HRD practitioners will need increasingly to orient their efforts towards developing skills alongside autonomy and to enskilling an empowered workforce.

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An Attitudinal Examination of the Role of HRD in Voluntary Turnover in Public Service Organizations

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This study examines the role of the work related attitudes of job satisfaction, organizational commitment along with attitudes related to HRD in voluntary turnover decisions. A sample of public service managers who voluntarily left their job in the previous year are compared against a sample of managers in the same or equivalent positions. The implication of HRD in public service organizations is examined along with recommendations for further research of the role of HRD in turnover decisions.

Keywords: Work-Related Attitudes, Turnover, Public Service Organizations

Human resource management (HRM) and human resource development (HRD) practices are increasingly scrutinized for their contribution to desired organizational outcomes. This is especially true during this current period of economic growth, low unemployment, and skilled labor shortages within many professional occupations in the United States service sector. As the value of human resources are increasingly realized in service organizations managing the flow and productivity of people employed assumes greater importance. Of central focus is gaining a greater understanding of the issues leading to the unplanned outflow of people, referred to as turnover. Turnover reflects the situation whereby an employee permanently ceases working for an organization. As a topic of HRM turnover has assumed greater importance as the monetary and non-financial costs of replacing and retraining employees is more thoroughly understood. HRD is also interested in this topic as turnover increases training and development program costs and raises issues related to ensuring that the knowledge of the departing employee is transferred to the new employee. Previous research has determined that HRM and HRD practices impact employee behaviors such as productivity and turnover as well as short and long-term measures of organizational financial performance (Huselid, 1995). The impact of this research stream has renewed calls for organizations to focus on HRM and HRD practices and programs that produce desired organizational outcomes. This study seeks to add new knowledge in regards to work-related attitudes, perceptions of HRD, and turnover in public service organizations.

Problem Statement

Almost every city and town in the United States has a public park, recreation and leisure service agency to provide a wide array of activities, programs, facilities, and information. These public agencies have remained the dominant delivery agent for these services for almost 100 years (Sessoms, 1987) despite competition from private for-profit firms and not-for-profit organizations. Hamilton (1995) notes that these agencies are seen as being an "archetype of most small public agencies due to their small size and emphasis on administration of specific programs and activities requiring specialized training" (p. 397).

There is support that public leisure agencies are increasingly recognizing the role of the human resources they employee for the successful achievement of delivering park and recreation services to the public in part because the human resources employed often represents the largest single expenditure in annual operating budgets (Rodney & Toalson, 1981; McKinney & Yen, 1989). Despite the lack of research into HRD practices and turnover in this form of public service agency it is noted that there is an increased reliance on part-time employees in local parks and recreation departments (Crompton & McGregor, 1994, Gladwell & Sellers, 1997) and a continued movement of full-time employees seeking employment in the private sector of the leisure industry or within different industries. These and other changes in the operating environment of public leisure agencies have focused the attention of managers and professional park and recreational associations on the retention of quality managerial level employees.

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More specifically, there is concern that employees may seek employment in public leisure agencies to benefit from training and development opportunities to build managerial experience and skill levels before seeking employment in other public and private organizations.

A wealth of literature examines the casual influences of turnover, and to a lesser extent, the impact of turnover on an organization. The vast majority of this previous theoretical and empirical work has focused on private firms driven by a profit motive. Within the service sector and more specifically the public service sector, a smaller number of studies have examined turnover. Yet, one form of public agency, public leisure service organizations, have been largely ignored. This research study will examine the role of work-related attitudes and HRD practices in the voluntary turnover of managerial level employees in public leisure organizations. This analysis will compare attitudes of recent voluntarily departed employees with current employees in identical or similar job positions.

Theoretical Framework

Turnover research has been a consistent theme within both the human resource and organizational behavior literature for over 30 years (Abelson, 1996) because of the costs associated with employees voluntarily leaving the organization (Hom & Griffeth, 1995). High rates of turnover tend to raise training costs, reduce overall efficiency, and disrupt other workers (Arnold, Cooper & Robertson, 1998). Over a decade ago an important development in the turnover literature was the realization that two types of voluntarily turnover occur, avoidable and unavoidable (Abelson, 1987). A related theme is a challenge to the assumption that turnover is a dysfunctional element that organizations should aim to minimize (Dalton, & Todor, 1993). These authors posit that it isn't how many; rather it's who is leaving. Despite the fact that turnover maybe beneficial for the organization high rates of avoidable turnover among full-time managerial and administrative staff tends to be an issue of concern. Turnover models have traditionally relied on the role of work-related attitudes in leading to the decision to leave. Two of the most frequently used measures of work-related attitudes in studies of turnover are organizational commitment and job satisfaction. Employees characterized by low job satisfaction and low levels of commitment are more likely to leave an organization.

In general terms, organizational commitment can be thought of as the level of attachment felt towards the organization in which one is employed (Meyer & Allen, 1997). The importance of organizational commitment is supported by empirical findings that show high levels of organizational commitment are consistently associated with low turnover, limited tardiness, and lower levels of absenteeism, (Jaros, 1997; Mowday, Steers & Porter, 1979). Job satisfaction reflects an individual's attitude toward his or her job and can be considered as either a global feeling towards the job or as related attitude about various aspects or facets of the job (Spector, 1997). The correlation of job satisfaction to turnover has dominated many existing turnover models with it now regarded that "this correlation is causal – job dissatisfaction leads to turnover" (Spector, 1997, p.62). The attitudinal models of turnover have also relied on measures of turnover intentions which reflects the attitude of an individual towards their continued employment within an organization. Turnover intentions are correlated with lower levels of job satisfaction and organizational commitment suggesting that those who have formulated the intention to turnover can be characterized as having lower levels of organizational commitment and job satisfaction.

Lee and Mitchell (1994) have suggested an alternative theory of turnover, which implies that organizational commitment and job satisfaction play less of a role in the decision to turnover than traditional models. They state that turnover decisions are automatic or driven by a pre-determined script developed by employees. Their unfolding model of turnover suggests that employees voluntarily quit in order to carry out a previously developed action plan or script that follows triggering events or shocks occurring in both their work and non-work life. It is possible that dissatisfaction with HRD is one script that results in turnover. For example, if an employee feels that are receiving inadequate opportunities for training and development then pre-prepared action plans associated with leaving their current job are enacted. The unfolding model of voluntary turnover is finding support as it recognizes that "turnover decision processes may be considerably more complex than indicated in previous models" (Maertz & Campion, 1998, p.71). The highlights the need for the application of alternative models of turnover, ongoing testing of existing models, and further investigations of the role of HRD in turnover decisions.

Purpose and Research Questions

The purpose of this study was to investigate work-related attitudes influencing the decision of full-time staff to voluntarily depart from employment in a public leisure service agency. To accomplish this an applied survey research design was used to assess relevant work related attitudes related to turnover in a sample of voluntarily departed and current employees in comparable positions to the departed employed in public park and recreation agencies. The voluntary departure of professional, administrative, and executive personnel in public leisure agencies within Illinois has recently emerged as a key area of concern for the two statewide professional organizations - the Illinois Park and Recreation Association (IPRA) and the Illinois Association of Park Districts (IAPD). More specifically, the stated research questions for this study were:

> *Do differences exist between measures of organizational commitment, job satisfaction, and perceptions related to HRD for voluntarily departed and current employees in comparable positions in public leisure service agencies?*

Methodology

This mixed methodology study involved all 288 public park and recreation agencies in Illinois. The vast majority of these public agencies are park districts (87%) however, other agency types include municipal park and recreation departments, playground commissions, and forest preserve districts. All agencies were sent a letter asking them to identify and provide the name, position, and last known address of the most recent voluntarily departed (within the previous twelve months) employee holding a full-time, non-exempt or full-time exempt professional or managerial position. These individuals (voluntarily departed) were then sent a short questionnaire. An identical questionnaire was sent to the agency for completion by two employees identified by the executive director with the identical or closest related position(s) to the voluntarily departed employee. Data collection was conducted using an adaptation of the Salant & Dillman (1994) total design technique.

The instrument used in this study was developed by the researchers. The Organizational Commitment Questionnaire (OCQ), designed by Porter, Steers, Mowday, and Boulian, (1974), was used to measure commitment. The OCQ is measured with 15 items on a 7-point Likert-type scale. The Job Satisfaction Survey (JSS) developed by Spector (1985) was used because of its high validity and reliability as well as its suitability to service organization settings. The JSS is a 36 item, nine-facet scale to assess employee attitudes about the job and aspects of the job. The nine facets of job satisfaction are Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards (performance based rewards), Operating Procedures (required rules and procedures), Coworkers, Nature of Work, and Communication. A series of open-ended questions related to the events that might lead to the formation of turnover intentions asked of both current and departed employees were adapted from Lee, Mitchell, Wise, and Fireman (1996). In addition to working conditions, a number of questions related to HRD policies and programs. Both questionnaires for voluntarily departed and current employees contained the same items with wording to reflect either current or past employment. Data analysis used descriptive statistics, independent T-test for significant difference of means, and identification of themes from questions seeking a more qualitative response.

Results

A total of 37 voluntarily departed and 133 current employees completed the survey. Each organization with a voluntarily departed employee was represented with at least one current employee in the same or similar position. As organizational contacts distributed the survey the exact response rate cannot be determined. The 37 voluntarily departed employees, carried a wide range of job titles in their former position with recreation supervisor and program manager being the most frequently reported (27%). The respondents had an average of 6 years in their past position and 6.5 years in the organization prior to turnover. Two-thirds (66%) were female, and 66% had a bachelors degree. Of the 133 completed surveys from employees with comparable positions, the majority (35%) carried the job title of recreation supervisor/director. Current employees had an average of 5 years in their current position and 6.6 years with the organization. Respondents were 57% female and 65% had a bachelor's degree.

The results for organizational commitment and job satisfaction show that voluntarily departed employees reported slightly lower levels than their currently employed counterparts. These results are presented in Table 1. Significant differences in organizational commitment were found between the two samples with currently employed reporting higher levels. On the whole, those currently employed were more likely to be satisfied with their job than those who voluntarily departed, although currently employed reported lower satisfaction with operating conditions such as organizational rules, policies and procedures that those voluntarily departed. Of the nine job satisfaction facets, only satisfaction with supervision was significantly different between voluntarily departed and currently employed.

Table 1
Means And Mean Differences Of Organizational Commitment And Job Satisfaction Between Departed And Current Employees.

Variable	**Departed N = 37**	**Currently employed N = 134**	**T statistic**	**df**	**Sig**
	Mean	**Mean**			
Total organizational commitment	4.8	5.3	2.76	169	.006
Job satisfaction subscale					
Pay	14.0	14.6	.66	169	.511
Promotion	11.6	12.4	.95	169	.342
Supervision	17.9	20.2	2.42	48.42	.019
Fringe benefits	17.7	17.7	.04	169	.964
Contingent rewards	14.2	15.5	1.40	169	1.64
Operating conditions	14.4	14.2	-.31	169	.751
Co-workers	17.8	18.8	1.41	169	.160
Nature of work	19.8	20.6	1.25	169	.213
Communication	16.1	16.7	.78	169	.438
Total job satisfaction	142.4	149.3	1.59	169	.113

The more qualitative responses in which voluntarily departed respondents described the circumstance that surrounded the time they first began to feel or think they should leave their job prove most enlightening. The responses range from early retirement opportunities, frustrations with clients, supervisors and boards, dissatisfaction at compensation, reward packages, and training opportunities, and the desire to seek new challenges in other agencies. Two main themes emerge from these descriptive responses surrounding the decision to leave. The first theme reflects elements of job design or the atmosphere at work as creating feelings towards turnover. The second major theme to emerge was the perceived lack of challenge associated with their former job. Several made specific mention of a lack of access to training and development opportunities for enhancing the challenge of the job. Several respondents expressed sadness that their agency could no longer provide the challenge and variety of job tasks that they now desire. It is worth noting that turnover for promotion or advancement did not appear as frequently as a desire to broaden and enrich work experiences.

Respondents currently employed in comparable positions were asked to describe the circumstances that would make them feel like they should leave their job. The most dominant themes emerging from this open-ended item reflected aspects of job design and the atmosphere at work. Continues access to training and development was mentioned as being vital to ensure that employees had the right skills and abilities for their job tasks and a positive and supportive work environment. Leaving as a result of a reduction in pay and/or benefits was the second most frequently reported reason for a currently employed to think about leaving, with perceived inequities in regards to salary increases, promotions, and opportunities for significant investments in development activities ranked third. The final dominate theme reflected leaving if their current job failed to provide challenge or if further career advancement was no longer possible within the organization.

The core questions related to perception related to HRD practices indicated that almost 60% of the voluntarily departed employees in this study reported that their career was progressing the way they expected it to. However, only 40% expressed that they felt that their supervisor provided them with guidance in their career planning in their previous position. Despite the lack of career planning guidance from supervisors, 87% stated that their previous job provided adequate opportunities for training and development. The majority (57%) now find themselves in a current job that is related to their previous position. Only 14% of the voluntarily departed employees from public park and recreation agencies are currently employed in a very unrelated position to the one from which they left.

Conclusion And Recommendations

Very few studies have examined the potential role of organizational commitment, job satisfaction and perceptions with HRD practices towards employee turnover in public leisure service agencies. This study sought to extend previous turnover studies in this field by seeking the voice of those who had voluntarily decided to leave a park and recreation management position within the last year. Numerous data collection issues involving locating and soliciting responses from former employees arose highlighting the difficulty of using former employees in organizational studies of turnover. The finding of significant differences in organizational commitment between the two samples highlights the need for park and recreation managers to focus attention of the psychological level of attachment that employees feel. However, job satisfaction, with the exception of satisfaction with supervisors, was not found to differ between the two samples. This appears to contradict well-established turnover models. Alternatively, it may reflect the uniqueness of the public park and recreation profession or mirror changes occurring in the workplace regarding the attitude that people have towards their work. These findings may cause leisure service managers to alter the way in which turnover is viewed.

The results also appear to support the unfolding model of turnover of Lee and colleagues (1994, 1996, 1997). Recent research by Lee and Maurer (1997) among knowledge workers in high turnover occupations highlights that low levels of job satisfaction do not play the significant role in turnover once previously thought. The results of this study may suggest that public park and recreation employees experience shocks or events that initiate a series of psychological deliberations resulting in a decision to either remain or leave. The qualitative responses included in the present study highlight the shock or trigger events, such as lack of challenge, frustration with clients, supervisors and, boards, that both current and former employees feel would result in a turnover decision. It also appears that access to HRD may play a role as a possible shock for some employees. Further research using both quantitative and qualitative methodologies could provide much needed information on the type and magnitude of shock events and their role in the decision to leave employment with a public leisure organization.

New Knowledge For HRD Research

The findings of this study suggest many implications for administrators in regards to the management of employee retention in public park and recreation agencies. Human resource management practices including training and development can have a significant influence on the decision to remain or leave and organization. To date, very little research has explored the HRM and HRD strategies utilized by public leisure agencies and their impact on turnover. Possible solutions based on Mowday's (1984) buffering strategies for adapting to high turnover include the expansion of training and development programs to increase the capacity of human resources. Cross-training employees for multiple jobs increases the ability of the organization to minimize negative impacts following turnover. The management of beliefs about the causes for turnover is considered vital to avoid the creation of a turnover culture (Abelson, 1996) and negative images about turnover. Mowday (1984) also suggests that organizations create a core of highly committed employees. While high levels of commitment are desirable from all employees it is essential to ensure high commitment among a core group of key managerial employees. The results from this study have highlighted that significant differences exist in the level of organizational commitment between those who are currently employed and those who voluntarily left. While this may appear obvious it also suggests that commitment can be monitored and to a lesser extent managed for desirable organizational outcomes such as minimizing the negative effects of high turnover. The potential role of HRD in the establishment and maintenance of organizational commitment warrants further research.

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A Passion for Work: Developing and Maintaining Motivation

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We present a model for a transformational process for developing a passion for work. To substantiate the model we conducted two studies gathering both quantitative and qualitative data. We interviewed 107 working adults, conducted 7 in-depth interviews, and collected 105 surveys on passion and work. Analysis led to the synthesis of five keys for developing passion and to a construct we call Occupational Intimacy. The studies and model are discussed as well as specific findings.

Keywords: Motivation, Employee Development, Emotions

Motivation has long been studied by organizational, educational, and clinical psychologists. There have been many different theories put forth to describe how to develop motivation within individuals, organizations, and systems. Despite the host of papers and books on the subject, motivation continues to be a national concern. Good employees' burnout, motivation turns to apathy, and there is a continual brain drain from organizations. The workplace of the future is going to be very different in how we recruit, develop and keep employees. Demographic researchers of the Generation Xer's paint a picture that includes sign-up bonus, no company loyalty and severe shortages of trained technical employees in the coming years (Bova & Kroth, 1999; Tulgan, 1998). Motivating employees will be key to keeping good people from leaving. Many companies are already facing these problems. In this paper we propose a model for examining motivation from an emotional perspective which also includes dimensions of environmental, biological and cognitive factors. The theoretical model is grounded in literature and drawn on the personal stories of people who both have and lack passion for their work.

Passion

Passion is defined as a deep, overwhelming emotion or boundless enthusiasm (Webster's, 1990). Freeman (1993) defines passion as a generalized feeling of enjoyment and absorption which comes from participation in an activity that one truly enjoys. He goes on to describe that the word passion is analogous to the German word "functionlust", which can be translated to be 'love of work.'

By virtue of being human, we all experience passion. Passion evokes images of deep commitment to another person, to an idea, or to a cause. We long for it; we sometimes curse it. Passion is at the root of all creative genius, personal transformation, and all notable events. Passion is emotional energy, it stimulates life, and energizes individuals to work towards a goal. It propels willpower, gives one boldness, and is an outlet for emotional, physical, and creative release.

Every person has the capacity for passion. Many do not lead passionate lives, however. The passion has been beaten out of them by society, or their work, or by significant people in their lives. We humans have the built-in power of choice. Therefore these people, somewhere along the line, decided - whether they knew it or not – to lead less passionate, more bland, less exciting, safer existence's.

Influences on Passion

Several factors influence our level of passion. Some are outside our control. For example, each person is born with a certain capacity for passion. Each person comes into the world with biological mechanisms which drive her or him. From our parents and grandparents we inherit a range of predispositions – including fight or flight

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instincts, the drive to survive, and emotional tendencies. We are also powerfully affected by the first few years of our life. Changing the qualities which our parents and early environment foist upon us is difficult. We also can't control luck – whether or not we run into the right job at the right time or the right person in the right place is often outside our control.

Beyond these limiting factors, we have incredible opportunity to make our lives passionate ones. Within our power is the ability to make choices that lead to the kind of lives we can pursue with enthusiasm and energy. Within our power is the ability to discover the kind of work that we can follow with passion. Within our power is the discipline and determination to then create the life we imagine and yearn for. After taking into consideration the things that we cannot change, the rest is entirely up to us. If we want to have an exciting, intimate relationship with another person, if we want to make every day fun and enjoyable, if we want jobs and careers that are passionate to a very large extent, we can have them.

Today's new employees

Several researchers have been investigating the workforce of the future (Bova & Kroth, 1999; Tulgan, 1998). The terms Generation Xer's, Nexter's, and such have been associated with people entering the workforce today and continuing for the next ten to fifteen years. Because there will be fewer people to take the place of the current baby boomers, recruiting and keeping employees will be one of the toughest organizational tasks for at least the next two decades. The values of these new employees will emphasize less loyalty to organizations, more job-hopping, a greater importance on having fun, and quality time off. With the approximately 77 million boomers being replaced by only 44 million Gen Xer's (Losyk, 1997), organizations will increasingly need to try to motivate employees in order to keep them.

Today's new value emphases

Warren Bennis (1998) talks of the importance of purpose and leadership. He states that, "Purpose is a small word, two syllables, but it contains three major dimensions: passion, perspective, and meaning." (p. 5). He goes on to say, "I have never met a great leader without passion. Many leaders are rather soft-spoken, but when they talk they are passionate." (p 5).

Peter Senge (1999) also talks about the importance of passion and the values that typify it. He says,

> Our traditional system of management, based on the purpose of maximizing the shareholders' return, is the most well-designed system imaginable to produce consistently mediocre results. Companies like VISA, Shell, Toyota, Scania, and Interface have found that the key to success is not obsessively measuring costs and profits – it's nurturing the passion, imagination, creativity, persistence, patience, caring and desire to contribute. If you don't have those soft, unmeasurable things, you will never have an enterprise what can be highly successful. These organizations are managing performance in a way that is more consistent with how nature works. (p. 9)

America is going through a current passion for spirituality (Wolfe, 1998). Millions of Americans have gone through major shift in cultural values and personal behavior. It could be that after years of materialistic self-indulgence, boomers are looking in new ways to find meaning in their lives. They are looking at the realm of spirituality as the place to find this meaning.

Theoretical Framework

The basis of our model for developing and maintaining motivation is drawn from the research in the psychological field of passion. The development of our model began with a search for what makes people love their work. What makes a passionate employee? Why do passionate employees lose their passion? Passion has been studied in the literature, usually in the area of relationships and love. We borrowed the concepts from this research but instead of looking at relational love, we looked at love of work. Starting with Sternberg's (1988) seminal work, The Triangle of Love, the components of love are dissected and passion is viewed as playing a key role in emotional attachment. Sternberg defines passion as, "...the expression of desires and needs – such as for self-esteem, nurturance, affiliation, dominance, submission..." (p. 42). He goes on to say that passion tends to interact strongly with intimacy and that these two fuel each other. Passion is what initially draws one into a situation. This led to our thinking of the role of intimacy and work. If intimacy fuels passion then how can we become 'intimate' or close to our work? What is 'occupational intimacy'? How can organizations foster this concept?

The developmental work of Freeman (1993) also influenced the model. Freeman looked at the lives of six historical figures and six living figures examining how passion influenced their lives and motivations. He used a four-factor interactive system of human motivation consisting of biological factors – a person's preparedness; environmental factors – rewards and punishments in the system; emotional factors – mostly emotional reactions; and cognitive factors – subjective meanings individuals give situations. He found that these four variables interacted to affect passion. And, that passion generally influences productivity.

Baumeister and Bratslavshy (1999) looked at how passion changes over time. They found that passion reflects the subjective perception of increasing intimacy. High passion is seen to be rising when intimacy is felt to be rising. Again we found the connection between passion and intimacy, between passion and cognitive perception, passion and environment. Other authors whose work influenced this model include Davis and Todd (1982), and Berscheid (1983) who all saw passion as a state of strong psychological arousal.

Apps (1996) looks at the spiritual, biological, intellectual, and emotional dimensions of teachers' work. He prescribes a move from a more traditional approach to what he calls "teaching from the heart." This concept, which we borrow and rename 'working from the heart,' implies helping employees to understand themselves, what motivates them, and to use this depth of knowledge to begin to love their work, to form a connection; a connection which both feeds the individual and the organization.

Organizational theorists also have looked at motivation. Kouzes and Mico (1979), as well as others, found that environments have conflicts built into their structures which deflect motivation levels. A recurring theme in the current organizational literature is that of the role of passion, spirituality, and purpose in the lives of successful people [i.e., (Bolman & Deal, (1995); Covey, 1990; Handy, (1994); Harvey, (1994); Wheatly, (1992)]

Purpose of Study

Emotions in organizations usually are reluctantly acknowledged and then dismissed favoring rationality over non-rational thought (Beres & Wilson, 1997). Given the above factors which define the new workforce and values which are thought to be important and driving factors, our questions stem from the role of emotions in organizations, in particular, looking at the importance of passion to one's work, productivity, and motivation.

Our model seeks to understand the role of powerful emotions as they give rise to intense energy and determination, allowing employees to realize otherwise impossible achievements. By acknowledging these powerful emotions and sharing the reality of working in an emotional climate, organizations can capitalize on this energy, help to develop and maintain it, and keep their employees from seeking outside outlets for their vast emotional energy. Further, we want to look at how passion for work develops, ebbs and flows, is lost and refound. Lastly, we hope to discover the actual mechanisms for helping develop and maintain a passion for work.

Methods

A model for examining passion was developed translating the romantic love and sexual attraction mechanisms into a workable framework for discussing and understanding passion for work. In this model, 'passion' is not used to imply feelings of romantic love, rather, it is used as a term which implies a strong feeling of enjoyment towards work. Although strong passion can lead to negative results, i.e., burnout, disappointment, lowered expectations, it is the positive aspects that drive the theory – absorption in work, enjoyment of work, increased productivity, etc.

Four Determinates of Passion

Based on an extensive literature search and subsequent analysis, we proposed the following Determinates that yield positive results of passion. Our model assumes that there are underlying factors which influence passion (Freeman, 1993). These factors may or may not be out of our control. However, the Determinates are under our control. The Determinates are the basis for the passion development process in our model. The four proposed determinates are:

Determinate 1 – self-knowledge of emotional adaptability and emotional response patterns; a high EQ rating
Determinate 2 – self-knowledge of life mission; understanding and wanting to do the work
Determinate 3 – an environment which allows for occupational intimacy; ability to work autonomously, interdependently, in a situation conducive to work and a sense of enjoyment
Determinate 4 – ongoing cognitive and emotional development; the subjective as well as the objective development of meaning around the actual work.

In order to study our proposed model we conducted two studies. The first study was designed to provide data to substantiate the Factors underlying or influencing passion. The second study was to substantiate the Determinates or proposed processes of our model.

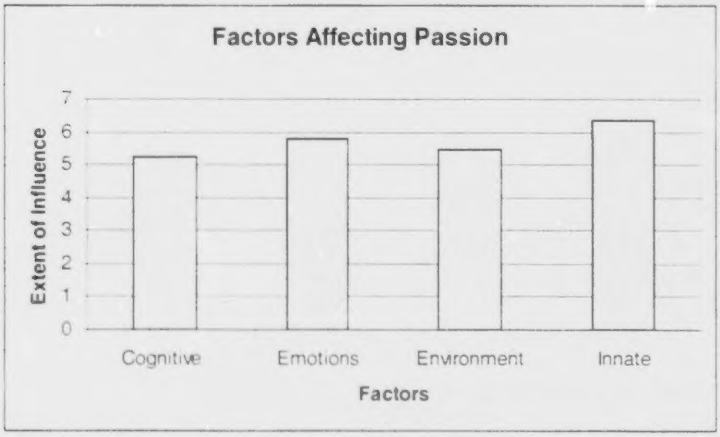
Study One: Survey

A survey was developed to gather data on the constructs of the model. A total of 105 working adults responded to 11 likert scale items. Questions dealt with processes and genesis of passion based on Freeman's (1993) four factors, such as,

1) How much of your feeling of passion is a thinking process?	*Not at all*			*Some*			*A great extent*	
	1	2	3	4	5	6	7	8

All four factors were found to be important to passion at work. Table 1, Factors Affecting Passion, shows the mean value of influence to passion of each of the four factors. All were found to be strong influences with innate personality as the highest influence on passion, followed by emotions, environment and thinking processes.

Table 1 Factors Affecting Passion



Study Two: Interviews

After finding validation for the four Factors, we completed short interviews with 107 working adults and then did 7 in-depth interviews with a sub-sample to develop our model and the four Determinates of passion. Both sets of interviews asked questions regarding where and when people have felt passionate. For example, people were asked what was the genesis of their passion, how did it affect their productivity, and what were the keys to regaining it. Each person was asked to describe a critical incident or example of a time when he or she and lost and regained passion, and what the factors were for each. For the large group only short answers were given. We then identified seven people who felt very passionate about their work and had achieved major accomplishments. These seven interviewees were asked to go more deeply into their understanding of passion, its relationship to their work, and their history of passion and work. These interviewees included two men and five women.

The analysis of the qualitative data provided evidence of several barriers or detriments to having passion for work. These were boring or routine work, working in an overly controlled environment, feeling inadequate, and working under conditions of manipulation, dishonesty or lack of trust.

More important were several keys to helping develop passion for work. These findings are the result of all 107 interviews. These keys substantiated our model and helped us to refine it. The interviewees told us that there is a relationship between passion, self-knowledge, work environment, learning and productivity. People with passion for their work are more likely to work harder, more creatively.

Key #1 - Discovering

Passionate people have discovered work that excites them. For some it's easy–they know from early in life. Others have journaled, changed jobs, gone back to school, found a mentor, or followed career development advice. One person we talked to told this story.

"I was working with the poor, and committed to developing quality programs that aided clients in breaking the cycle of poverty. I was exposed to corruption, token programs and institutional politics that tied my hands so I couldn't affect policy. I left my position discouraged and disillusioned and doubted whether I could ever work in this field again. I read 'What Color is Your Parachute' (by Richard Bolles) and completed several exercises which led me to the conclusion that I would never be happy in a job where I couldn't have impact on policy. I have returned to my line of work and I am passionate about what I do. I want my team and our clients to share similar passion and focus about their lives, too!"

The first key is discovering what excites you. Smart organizations find ways to help their employees discover their passion.

Key #2 – Creating

Passionate people find ways to make their lives exciting, meaningful, and special. Taking what they've discovered about themselves, they shape their own lives to fit it. We talked to Robert, an entrepreneur who owns his own company. Successful at a young age in the supermarket business, Robert discovered that he would be unhappy spending his life managing stores so, with a wife and four children, he quit his job and returned to school, taking enormous personal risk. It has made all the difference, because since then he has owned and operated several successful businesses. Most important, he comes to work each day passionate about what he does.

The creating process involves setting goals, learning and developing, surrounding oneself in environments which encourage passion, and taking risks.

Key #3 – Risking

Risk is an important part of living passionately. Those living passionately invariably have taken or are taking risks. To do otherwise is to be safe, not learn, sit on your heels, and regret opportunities missed. For most people, the trick is to be thoughtful and intentional about risk-taking. It is taking risks that moves you toward passion and allow you to grow, but won't be devastating if unsuccessful. For some, a major risk would be to speak up in a meeting or to make a speech, for others, like Robert, a major risk would be to quit his job and go back to school. We tend to think of passion as adventurous and glamorous, but passion comes in many forms. A 54-year-old woman in the healthcare business told us how she took a risk that changed everything.

"I basically possess a passion for accurate coding and billing of healthcare services. I became very frustrated, disillusioned, and weary of billing for one department of physicians because they didn't appreciate the difficult position they were placing me in daily by submitting questionable billing. After numerous attempts to reach them had failed, I transferred to another department where my job was to identify improper billing and report it. I felt once again a renewed passion for the task and a sense of empowerment that I may be able to affect a change for the better."

Rather than taking the safe road and being miserable, this woman changed jobs, which made all the difference. Organizations can be very helpful in supporting this kind of risk-taking behavior. People who take risks are constantly learning—about themselves and about their work.

Key #4 – Learning

Passionate people are always learning, reinventing themselves, and exploring new things. You must be learning in your job to have passion. If you aren't, you want to either find new things to learn or move on to something new. A 37-year-old clerk told us that he is, *"passionate about my job when given a new challenge and allowed to be creative. I tend to lose passion when the job becomes stagnant."*

Learning involves having the ability to make choices. *"The field of plastic surgery always was exciting and challenging,"* a retired physician says, *"The ability to help others was quite rewarding until managed care came into play and we lost our ability to make decisions. It became a frustrating task!"*

People who are constantly learning are more likely to be passionate, and to feel confident about their abilities.

Key # 5 - Self-Efficacy

Self-efficacy is the belief that we have about our ability to do something. It powerfully affects our behavior. I may have the skills and talent to take a more challenging job, but if I believe that I'm incapable of being successful, I'm unlikely to apply for that job. Positive self-efficacy is developed by trying things and then evaluating how you do. People with low self-efficacy are unlikely to try new things, and hence lead less passionate lives. One of the most important aspects about self-efficacy is that we can change it from low to high. Often, taking little baby steps builds self-efficacy over time.

By taking little or big steps, we are taking *risks*, as we risk we *learn*, and as we learn we develop higher *self-efficacy*, our belief in ourselves, and that we can accomplish what we set out to do. All three, working together, advance our quest for a more passionate life.

Occupational Intimacy

Occupational Intimacy is a term we developed to represent the closeness which passionate people feel about their work. Like two passionate lovers, people in love with their task feel that their work is inseparable from themselves, it is a part of who they are. They feel a sense of personal commitment to what they do. They are emotional about it, they have strong feelings of dedication, care, support, and desire associated with what they do. Passion for work often involves receiving recognition and rewards, but many times people are so in love with their work that they would do it for the pure joy they feel about it. One person described occupational intimacy as devoting *"yourself to a job because you like it, enjoy it, and bring happiness to your fellow human beings."*

Another aspect of Occupational Intimacy is the relationship one feels towards the people they work with and the organization. This intimacy is high when one feels that the organization, the leaders, the managers and coworkers truly care about them and how they do their job.

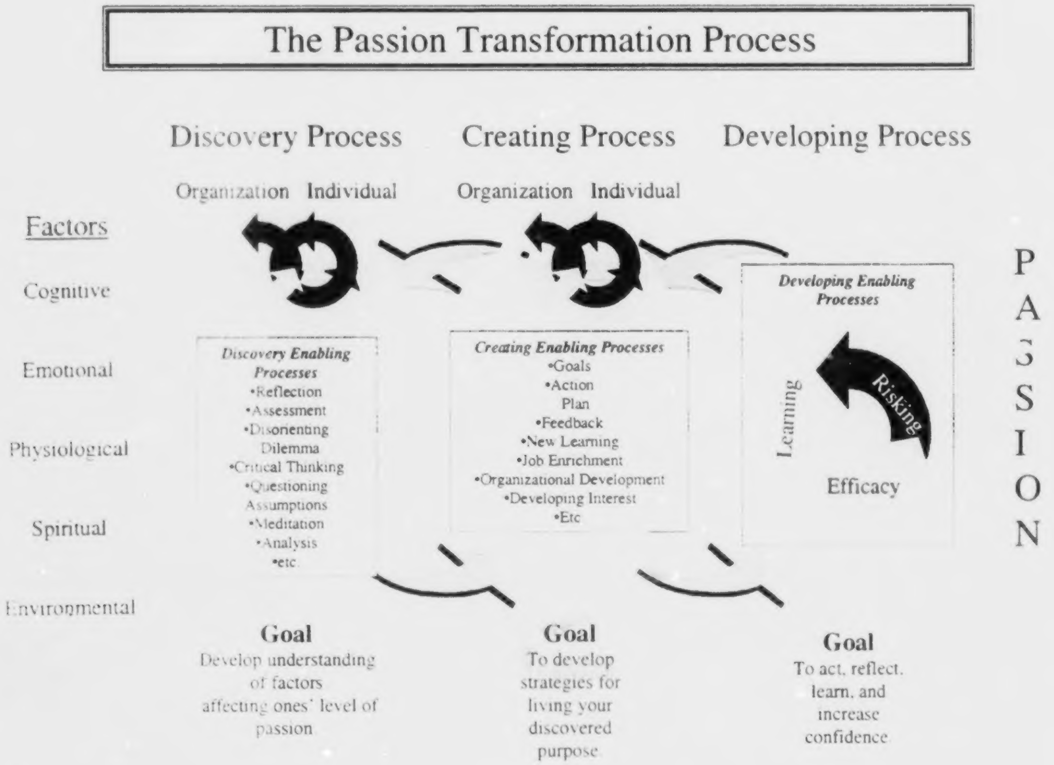
Practicing the five keys to passionate work—discovering, creating, risking, learning, and self-efficacy—leads to occupational intimacy…and passion. The result is what one person we talked to described as,

> *"Lighting up from the inside. Aliveness. Transcendence. Feeling totally present and absorbed. Joy. Wonder. Moving, inspiring, resonating, vibrating."*

Passion Transformation Model

Our model (see Figure 1) relates the Factors underlying passion as inputs to a systematic process of Discovery and Creating, based on the four Determinates of passion, with the output resulting in greater passion. This same process can be used to develop passion for work, for relationships, or for life in general. Within the Discovery and Creating processes are Enabling Processes that work to define, develop, and promote passion. The Enabling Processes and the overriding processes of Discovery and Creating can be intertwined and repeated as necessary. This is a preliminary model as we continue to gather data to refine it.

Figure 1. Process Transformation Model


The Passion Transformation Process
Discovery Process
Creating Process
Developing Process
Organization
Individual
Organization
Individual
Factors
Cognitive
Emotional
Physiological
Spiritual
Environmental
Discovery Enabling Processes
•Reflection
•Assessment
•Disorienting Dilemma
•Critical Thinking
•Questioning Assumptions
•Meditation
•Analysis
•etc
Creating Enabling Processes
•Goals
•Action Plan
•Feedback
•New Learning
•Job Enrichment
•Organizational Development
•Developing Interest
•Etc
Developing Enabling Processes
Learning
Risking
Efficacy
PASSION
Goal
Develop understanding of factors affecting ones' level of passion
Goal
To develop strategies for living your discovered purpose
Goal
To act, reflect, learn, and increase confidence

Importance to Human Resource Development

The goal of developing this model, and the continuing work to substantiate it, is to help develop and maintain passion in employees. The model is developmental in that it is first prescribed for individuals use. During this time the Determinates of self knowledge of emotionality and mission should be deliberately stressed and the individuals should come out of this period with clear self-understanding. The Determinates of organizational environment and ongoing development should be in place in organizations. This is primarily implemented through policy, administrative style, and professional development opportunities.

Little emphasis is placed on training individuals to love their jobs. Instead, administrators often attempt to 'motivate' through incentives. This model advocates training individuals to love their work though careful job selection, understanding, and placing an emphasis on the emotional reaction to the work. The model's major emphasis is on the role of learning and passion. We can *learn* to be more passionate people.

Howard Roark (Rand, 1943), in *The Fountainhead*, said

> I have, let's say, sixty years to live. Most of that time will be spent working. I've chosen the work I want to do. If I find no joy in it, then I'm only condemning myself to sixty years of torture. And I can find the joy only if I do my work in the best way possible to me. But the best is a matter of standards—and I set my own standards. I inherit nothing. I stand at the end of no tradition. I may, perhaps, stand at the beginning of one. p. 24-25.

Emotions in work have not held a very high place – usually they are reluctantly acknowledged and quickly rationalized, or totally denied as existing at all (Beres & Wilson, 1997). In contrast, we advocate for the rightful and motivational place of emotions within organizations and the importance of capitalizing on the energy and motivating power of passion. With the increased attention to a values based organization, our model is a step forward in helping develop leaders, employees and workplaces. Through passion and occupational intimacy - an emotional connection to one's work - motivation and productivity can be augmented.

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The Influence of Multiple Performance Interventions on Employee Turnover: A Case Study

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Most research on employee turnover is survey-based research that gives only a brief "snap-shot" of turnover and its possible causes. There is little or no research that addressed turnover as a specific performance problem through application of a qualitative approach using multiple interventions designed to minimize or correct the problem. This study addressed employee turnover in a textile plant as a multi-faceted performance issue. It also identified various causes of turnover through a performance analysis and through the results of implementation of multiple interventions that were designed to influence employee turnover.

Keywords: Employee Turnover, Qualitative Research, Performance Analysis

Employee turnover is a costly and systemic performance problem, particularly in textile-related industries that use skilled and semi-skilled labor. It is estimated that the annual per-person costs of turnover ranges between $1,200 and $20,000 depending on the position, and may be as high as $40,000 (Mercer, 1998).

A textile manufacturing company located in a mid-western metropolitan area had an annual employee turnover rate that approached 90%. The high turnover rate negatively impacted the plant's ability to meet the established efficiency ratios and many operator trainees failed to complete their training probation. Although the plant's management team was concerned about the excessive employee turnover rate, no strategy existed to address the issue. A research project was designed and implemented to address the high operator turnover. The 30 month long project used qualitative case study methods to analyze data and develop and evaluate interventions that influenced the excessive turnover rate.

Most research on employee turnover is survey-based research that gives only a brief "snap-shot" of turnover and its possible causes. Although much research is published on turnover and related antecedents to employee turnover (Buchko, 1992; Cohen, 1993), a review of literature uncovered no research that addressed turnover as a specific performance problem through application of a qualitative approach using multiple interventions designed to minimize or correct the problem.

The present study addressed employee turnover in a textile plant as a multi-faceted performance issue. This means that performance was defined as the results of more than one action or influence. It also identified various causes of turnover through a performance analysis and through the results of implementation of multiple interventions that were designed to influence employee turnover.

The problem and theory under investigation stemmed from a general research question of "To what extent does the use of a performance improvement process influence employee turnover? This question represented the comprehensive theory of performance improvement as an influence on turnover (Yin, 1994).

Theoretical Framework

The conceptual model used in this study was a synthesization of a performance improvement model and a naturalistic paradigm represented by qualitative methodology. The performance improvement model consisted of the following steps: (a) performance analysis, (b) identify applicable intervention(s), (c) design and develop interventions, (d) implement, and (e) evaluate effectiveness of interventions.

Although performance improvement is typically viewed in the positivist frame, the present study approached the performance problem of turnover from a multiple-reality, value-bound; time-and-context bound, and researcher as participant framework (Lincoln & Guba, 1985). Thus, the performance problem was addressed with a general process model coupled with a methodology and a research paradigm based on naturalistic inquiry.

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Research Question

The research question used to guide the study was "How do multiple or multi-dimensional interventions based on a performance analysis affect the identified high employee turnover rate?"

Methodology

Given the focus of the research problem, qualitative strategies were appropriate to guide the collection of data. There were two reasons why qualitative methods were preferred over quantitative methods for this research: First, the nature of the work environment, the complexity of the performance problem, and its relation to training dictated an "in-depth" level of understanding of the phenomenon of turnover and its context than quantitative research might produce (Denzin & Lincoln, 1994); and, second results of the literature review indicated less than satisfactory results on reduction of turnover using quantitative measures.

The phenomenon under investigation was employee turnover. The context of the study was a textile organization including the subjects impacted by the phenomenon. Employee turnover in this study was defined as turnover of operator trainees.

Case study methods included one-on-one interviews, review of the organization's extant data, observations, scripts, and use of nominal groups. In addition to data collection activities trustworthiness was established through prolonged and persistent engagement, a clear audit trail, triangulation of data and methods, member checks, and peer debriefings. Collected data were confidential and participants' anonymity was protected throughout the study.

Site and population sample

The organization was a textile manufacturer (plant) situated in a mid-western metropolitan area. The employment environment for the duration of this study was a restrained labor market. Restrained inferred a low unemployment rate (approximately 3%) coupled with limited availability of skilled or semi-skilled labor. Employment in the region was restricted primarily to low-wage, low-skilled labor and limited technical and service-oriented employment.

The population under study was approximately 600 employees including representatives of the bargaining unit that made up approximately 50% of the hourly workforce. The workforce was primarily female (85%) and diverse with approximately 60% Caucasian, 14% Asian, 3% African-American, and 23% Hispanic-origin. Subjects were directly related to or impacted by the phenomenon of employee turnover.

The sample included the plant and personnel managers, five plant supervisors, 12 operator trainees, six "leavers," e.g. former employees, seven incumbent operators, two maintenance employees, eight trainers, three bargaining unit representatives, and one personnel staff for a total of 46 employees interviewed and/or observed. This purposive sample was necessary to insure that information-rich cases would manifest the phenomenon (Patton, 1990).

Data collection

Data collection extended over approximately 30 months and was documented and divided into three parts: (a) an initial performance analysis, (b) implementation and investigation of several interventions based on results of the performance analysis, and (c) analysis and revision of orientation training.

Data were collected using (a) document review, (b) individual and group interviews, and (c) observations (Patton, 1990). Document review included materials such as production data, personnel records, exit interviews, and communication documents.

Standardized, open-ended and scripted interviews were conducted with "leavers" (past employees), the plant and personnel manager, personnel staff, trainers, operator trainees, and supervisors. The interview process was planned and piloted prior to actual interviews. All interviews were audiotaped, documented, or both, and included information on the subject/employee and the context of the interview (date, time, place, surroundings, etc.). In addition to standardized interviews, many informal conversational interviews were documented by contact sheet to support and validate the more formal standardized interviews (Patton, 1990).

Observations were conducted in several situations including meetings, social events such as eating lunch and taking breaks, during training sessions, and informal conversations. This prolonged engagement was essential to ensure research rigor and trustworthiness of data.

Observation was continuous and occurred throughout the study. Several hundred hours were spent in the plant by the researchers. In qualitative research, the researcher is a participant in the observation of the place, the actors, and activities under study. This prolonged engagement between the researchers and subjects was essential to ensure trustworthiness of the data collected. Prolonged engagement also served to increase familiarity and build trust with employees being observed.

The research strategy included data triangulation to insure trustworthiness of data collected. Trustworthiness was addressed through the use of (a) multiple methods and data sources, (b) member checks to cross-check the accuracy of findings and interpretations (c) an audit trail that used a numeric coding system to insure tracebility of data to its specific source, and (d) guarding against evidentiary inadequacy by collecting enough data, triangulating the data, identifying key aspects of complexity of the phenomenon, identity of disconfirming data, and reviewing discrepant cases in the study. Member checks included asking participants to verify interview data and having researchers review all interview data for consistency and accuracy.

Results and Findings

Results are categorized and discussed in three phases: (a) pre-analysis, (b) analysis, and (c) post-analysis. A brief review of how the data were analyzed precedes the discussion of results.

Data analysis

The goal of qualitative data analysis was to identify patterns in the data. All data received a code to insure tracebility (I = interview data, D = documents, and O = observations). All data were reviewed and reduced to identify categories, find connections between categories, and select core categories and validate others (Strauss and Corbin, 1990). Data were entered into and manipulated by an analysis software package called NUDIST running on a personal computer.

Pre-analysis phase

The pre-analysis phase included activities designed to familiarize the research team with the *context* of the phenomenon under investigation, i.e. employee turnover in a textile manufacturer. Results of the review of literature related to turnover, review of the regional employment situation, and awareness of culture and turnover-related issues within the plant are discussed below.

The review of related literature revealed that turnover was a common problem in the textile industry and that certain variables such as job satisfaction and work commitment were related to turnover. Few studies were located that examined the influence of training on turnover and most of the research focused on a single intervention such as an increase in pay or benefits to reduce turnover. Review of the regional employment data indicated that low unemployment had impacted many employers by increasing turnover in lower paying, low and semi-skilled job categories.

During the pre-analysis, the research team comprised on a consultant/professor and several graduate students in HRD spent time in the plant talking with operators, trainers, and other key employees, and observing. In addition to familiarizing the researchers with the plant culture, these activities enabled them to assess employees' attitudes toward the turnover problem and the research team's potential involvement. This period of familiarization served to build trust, a critical part of qualitative data collection. Another outcome of the pre-analysis activities was the discovery that many employees had ideas about possible causes of turnover, and they seemed relieved that the research team was, according to a trainer, "finally getting something going...on turnover" (I-24).

Analysis phase

The analysis phase included collecting data from various sources, in-process data analysis, assuring trustworthiness, and final analysis of all data. Analyses took place during the 26-month period following the pre-analysis. Coding of data allowed the researchers to develop an overall theoretical framework for the analysis phase that would otherwise be difficult or impossible to accomplish with such a large amount of textual data. For example, the axial codes in Table 1 were the basis for selective codes that formed the theoretical framework of the project. This means that as data were collected, axial codes, that are the broad constructs of the study, were developed and constantly reviewed against selective codes that resulted from the axial code analysis. Selective codes included (a) performance analysis, (b) interventions, and (c) organizational leadership and climate.

Miles and Huberman (1994) suggested that data be displayed so that the consumer of the data can draw their own conclusions; thus enhancing the trustworthiness of the data. For example, Table 1 shows the relationship between the phenomenon under investigation (turnover), the various contexts under which it occurred (work and employment environment), the on-going strategies that affected turnover, and the consequences of interventions.

The analysis was a causal condition that influenced the phenomenon of employee turnover and was a focal point for the plant's leaders and employees to finally begin to address the problem of turnover. The analysis resulted in a general profile of the organization and of employee turnover.

Results of the analysis phase revealed that (a) overall turnover in the plant was approximately 7% per month or 84% per year, (b) turnover was highest in two of the plants' eight production lines, (c) approximately half of "leavers" were female Caucasians and approximately half were male Hispanics, (d) turnover occurred during the first 21 weeks of employment, and (e) orientation training was a possible cause. Several possible influences of employee turnover were identified. They were (a) operator and trainer training, (b) management/ supervisory issues, (c) organizational communications, and (d) orientation training. Appropriate interventions for each of the possible contributors to turnover were considered and discussed with plant management.

Table 1. Axial codes' relationships

Phenomenon	Context	Intervening Conditions	Action/Interaction Strategies	Consequences
turnover	regional culture	labor market	interventions	train trainers
		leadership	redesign activity	train supervisors
	organizational culture	corporate pressures	plant closure rumour	job restructure
	corporate & industry culture	organizational climate		change communication strategy

Due to the trainers' identified lack of skills and knowledge and the suspected direct impact this deficiency had on operator training, it was decided that a more thorough analysis of all eight trainers was required. Each of the eight trainers was observed and interviewed. In addition, operator trainees, trainer's supervisors, and other employees such as maintenance workers who interfaced with trainers were interviewed.

Analyses of transcribed and coded notes and interviews indicated that trainers (a) were required to perform other duties besides training, (b) were not competent as trainers and some were not competent as operators, (c) were not given enough time to perform required training duties, and (d) were expected to be proficient in various non-training production operations. Having researchers review coded results with paradigm models and reviewing and analyzing the extent that coding was consistent with the paradigm model triangulated this data.

Post-analysis Phase

The post-analysis phase began shortly after the management report on the pre-analysis and analysis phases of the project. The post-analysis phase included drawing conclusions and recommendations from phases one and two, analyzing intervention needs and sequencing and implementing interventions, collecting and analyzing data from interventions, and drawing conclusions and making recommendations.

Immediately following the report to management the research team leader (now the sole researcher) reviewed plant turnover data. Overall plant operator turnover had decreased approximately 10% during the analysis phase (D-159-160).

Additional analysis was required to develop effective interventions from conclusions and recommendations generated during phases one and two. For example, the researcher asked key employees questions concerning the validity and usefulness of the analysis phase and what they thought should happen next. Results revealed that (a) the analysis disclosed more information than many thought it would, (b) employees were surprised that "university people could do something that was real" (I-148), (c) the results of the analyses were not surprising; i.e., several interviewed employees felt that they already knew the causes of turnover and thus the analysis simply validated those assumptions, and (d) the analysis should stop and "something's gotta be done to fix turnover, not just study it to death" (I-622).

As a result of the pre-analysis and analysis phases it was decided that since the trainer analysis had received prior attention, management/supervisory issues and organizational communication should be examined next, followed by an examination of operator trainer interventions, and then orientation training. The researcher facilitated discussions using nominal group methodologies that resulted in consensus on interventions. Plant management believed that the implementation of one or two interventions would provide the best and most expeditious return on investment and that the performance analysis had produced sufficient evidence to support the implementation.

Four interventions were identified and discussed for each of the four influences of turnover. Namely, (a) supervisory issues, (b) organizational communication, (c) trainer issues, and (d) orientation training. Each of the four influences of turnover and their interventions are discussed.

Management/supervisory issues. Results of interviews revealed those supervisory-related interventions such as (a) identification and review of specific job responsibilities with each supervisor, and (b) reallocation of production responsibilities for key supervisors should be addressed first.

The job responsibility review required an examination of job specifications followed by a review of job responsibilities by each line supervisor. Supervisors said that their job responsibilities needed to be revised to reflect actual tasks being performed. As a result, the researcher modified and validated supervisor job responsibilities. Since overall turnover rates remained stable during this time period, this intervention did not appear to influence employee turnover (D-189, D-196).

The reallocation of production responsibilities for key employees may have effected turnover. Key supervisor responsibilities were changed such as reducing the dependence on trainers for production duties. Results of observations of and interviews with key supervisors and their subordinates revealed that they believed the intervention was beneficial and had an effect on turnover. Turnover data supported a reduction in turnover in the production line of approximately 15% (D-220).

Organizational communication. Organizational communication was the second influence on turnover that required implementation of the three intervention(s) of (a) a reduction in the amount of communication-oriented paperwork, (b) revision in use of the plant electronic public address system, and (c) increased use of supervisors as communication "conduits" between management and the plant workforce. Each intervention is discussed below.

Respondents perceived that the introduction of the electronic bulletin board was especially valuable. The new bulletin board had bilingual capabilities and all messages were transmitted in both English and Spanish.

Shortly after installation of the electronic bulletin board, the paperwork reduction and supervisor communications interventions were simultaneously executed. A computer system was recently installed in the plant offices. Observations revealed that the computers had limited use by line supervisors and trainers, and were used almost exclusively by management and engineering personnel (O-429, O-501).

The intervention that focused on supervisors assuming the role of communications "conduits" was discussed with key employees and management. It was decided that to be successful in that role, supervisors needed interpersonal communications skills and knowledge training. Management decided that supervisory training should take place after the other interventions were implemented and their effects on turnover evaluated. Unfortunately, due to timing and priorities for other interventions, supervisory training was not implemented and its effect on turnover was thus not applicable.

During the paperwork reduction and public address system interventions, overall turnover rates declined by approximately 3% (D-1229). However, since several interventions were carried out simultaneously and one was omitted, it was not possible to isolate the specific effect of any one intervention on employee turnover. An increase in regional unemployment to over 5% may have had an impact on plant turnover in that more people were seeking employment, which may have affected employees' decisions to stay or leave.

Trainer training. Trainer training was the third influence on turnover investigated. Interventions consisted of "train-the-trainer" and skills training for trainers. An external consultant was contracted to develop train-the-trainer and trainer skills programs. Comprehensive training in operator skills and "train-the-trainer" skills were conducted over a 20-week period. Observations of training sessions and interviews with trainers revealed that they were satisfied with the training program, they felt learning new skills affected their trainees' abilities to learn, and they believed the training program affected operator trainee turnover.

During the train-the-trainer program and for approximately one month after completion of the training, overall plant turnover fluctuated plus or minus one percent. Therefore, trainer skill development, although important to management and the trainers, did not appear to have had an immediate influence on turnover.

Orientation training. Development and implementation of a realistic job preview (RJP) process to be used during orientation training was the final intervention addressed. Further analysis including observations, extant data review, and interviews with personnel impacted by the orientation process was conducted prior to selection and implementation of the RJP intervention.

Results revealed that (a) orientation was inconsistent, (b) although orientation was done in English, approximately 50% of trainees were Hispanic, and, (c) participants perceived orientation training to be too lengthy (I-1230), objectives were not clear (I-1303), and content was too complicated (I-1342).

Results of the analysis of orientation training, time constraints imposed by management and knowledge of the workforce supported the use of a videotaped RJP. The video was developed and pilot-tested as part of a planned overall revision of the orientation process, not as an independent intervention. That is, following results of the pilot test of the RJP videotape, the entire orientation training process would be revised, pilot tested, and implemented.

Upon completion of the videotaped RJP, a pilot test was planned and implemented. The pilot test consisted of a short questionnaire completed by all prospective employees. Items included questions about the videotape's objectives, clarity of information, quality, to what extent the videotape helped prospective employees make a decision whether or not to work for the company, and if the videotape helped them understand the operator job. Once prospective employees viewed the RJP videotape, they were given the option to self-select out of the hiring process or move on to the next phase.

The questionnaire was used weekly for approximately 6 weeks. Of a total of 123 questionnaires, 99 were completed and usable. A content analysis of the questionnaires revealed that the videotape (a) was easy to understand, (b) objectives were clear, (c) helped prospective employees understand that the company would be a good place to work, (d) helped them know more about the company and the job, (e) was of high quality, and (f) helped reduce turnover (D-1117).

Plant turnover rates during the RJP intervention declined approximately 22% (D-398-D-402). During this time, the majority of new hires were assigned to the production line that had a history of higher than average operator turnover (D-119, O-128). Turnover rates of trainees in this production line declined approximately 40% during this same time period (D-421). Again, unemployment rates in the region remained higher than average and may have had some effect on plant employee turnover.

The following external and internal events forced plant management to terminate he research project including the in-process orientation training revision: (a) escalation of a corporate-wide redesign process within the plant, (b) several local and national labor-relations issues requiring immediate attention, and (c) persistent rumors of an imminent plant closure.

The action/interaction strategies mentioned in Table 2 were evidenced in these internal and external factors. The plant manager discussed with the researcher on several occasions the impact of both the redesign effort and rumors of possible plant closures on the turnover efforts. The plant manager indicated that "the objectives of the redesign are not being made clear to everybody involved" (I-3337). The issue of plant closures surfaced during several conversations around the future of the facility. The plant manager said, "I don't really know what will happen…I just hope we aren't doing all this effort for nothing. It just wouldn't be fair" (I-1238).

In summary, the plant turnover rate at the beginning of this study was approximately 84% annually. During the study the turnover rate remained consistently lower and for a short time dropped to approximately 35% (D-2224). Overall, employee turnover averaged approximately 60% for the duration of the study. Therefore, operator turnover declined by approximately 24% (D-2229, D-4478, I-3173).

Conclusions and Recommendations

The reason for the less than satisfactory results on attempts to reduce employee turnover may be those multi-disciplinary causes of turnover are generally addressed with uni-faceted interventions. Beer (1990, 1996) argued for multiple methods and interventions to solve organizational performance problems such as turnover. Beer (1996) stated that limited methods resulted in a single intervention being applied with minimal results. In a related study, Swanson and Zuber (1996) found that a naïve over reliance on employee surveys as a single data collection process resulted in a failed organization development intervention.

The present study addressed the deficiency of performance-based research on employee turnover using a qualitative methodology. Additionally, this study added "field-based" naturalistic research to the human resource development and employee turnover literature.

The multiple intervention approach applied in this research appears to have influenced turnover. Thus, cursory analyses coupled with single methods or unidimensional interventions may have inconsistent and even unfortunate results. It is also interesting and meaningful to reflect upon this research in light of the many environmental variables, such as the labor market and rumors of a plant closure, that had a potential, albeit indirect, influence on results.

Future research might focus more on environmental variables, both internal and external, and identify the impact they have on turnover and other human resource issues. Finally, rigorous qualitative analyses and the use of multiple interventions may provide a better return on the extensive resources and efforts required influencing the dramatic financial costs of employee turnover.

It is important to emphasize that the causal relationships between a performance analysis, subsequent interventions, and employee turnover may be ambiguous if not misleading. To assume that implementation of any intervention has a direct and/or causal effect on a specific and complex performance problem such as employee turnover, may be overly simplistic. However, to disregard a qualitative, naturalistic approach to employee turnover as was accomplished in this research belittles alternative ways to view and solve ubiquitous human resource problems within complex and ever-changing organizations.

Finally, conclusions must be addressed in light of problems such as evidentiary inadequacy, which can cause erroneous assumptions and false interpretation of data. One explanation of this anomaly may be the effect of the performance analysis and the use of the RJP on the phenomenon under study. In other words, the strength of the PA and the RJP may have overridden the influence of other concepts such as organizational leadership and climate within this particular time, place, and context. Another plausible explanation of the discrepant case may be that stresses caused by redesign efforts and persistent rumors of plant closure could have had an influence on employee's decisions to stay with or leave the company, although this notion was not fully supported by the data.

How the research contributes to new knowledge in HRD

Three important lessons that add to new knowledge in HRD were learned as a result of this research. First, unidimensional interventions should be avoided when addressing complex human resource problems such as employee turnover.

Second, the analysis served as a catalyst for plant management, and specifically the plant manager to begin a plant wide focus on the issue of employee turnover. As a result, the performance analysis served as a causal condition for the problem of employee turnover.

Third, prolonged engagement was an important factor in building trust and obtaining trustworthy data. The continued collaboration among the researcher, the plant manager, and several key employees over a long period of time strengthened the relationship between analysis and development of interventions, and results. Additionally, the ability of the researcher to gain almost unlimited access to the plant for the duration of the long-term study was a constant reminder to concerned employees that the issue of employee turnover was unresolved. One possible conclusion is that a performance analysis may be a possible vehicle for researchers and others to study workplace issues requiring deeper and more meaningful investigations than *de facto* surveys or questionnaires can typically produce.

In addition to prolonged engagement, the overall rigor of the methods used in this research may have mitigated some of the validity concerns around the cause-effect relationship between interventions and employee turnover. Observing and constantly tracking quantitative data such as turnover rates during a performance analysis and implementation of multiple interventions may enhance the legitimacy of critically viewing the relationship between a given performance problem such as employee turnover and specific interventions.

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Emerging Career Development Needs as Reported by Adult Students at Four Ohio Institutions of Higher Education: A Qualitative Study

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The purpose of this study was to assess the career development needs of adult students at four Ohio higher education institutions. The qualitative research design employed in interviewing ten adult students allowed an emergence of four major themes: the need for self-awareness, occupational knowledge requirements, the need for decision-making strategies, and the challenges to career implementation. A Web of Personal Career Reality was developed as a descriptive model of the adult career development process.

Keywords: Career Development, Adult Development, Career Planning Model

Career development for adults is becoming a complex sociological need, requiring a high level of professional expertise. The estimated number of careers that Americans entering the job market today will have within their lifetime ranges from three to twelve (Hall & Mirvis, 1995a, 1995b; Herr & Cramer, 1996; McDaniels, 1989). As the population of the United States ages, life expectancy is lengthening, and people are expecting to have not one, but multiple careers within their lifetime (Herr & Cramer, 1996). Adults in the workforce are attending colleges and universities to update their knowledge and skills in record numbers. Many returning to higher education or making any career change, are seeking assistance from career professionals.

The purpose of this study was to assess the career development needs of adult students from their perspective. The qualitative methods used in this study allowed the participants to articulate the career development needs they had identified, and allowed the researcher to probe for clarification and additional information.

The initial questions asked included the following: What career issues do adults who are pursuing further education face? Are these challenges minor adjustments or major directional changes in the career path chosen earlier in life? What questions confront these adults in making a career transition? What goals are these adult students working toward? What kind of information do these adults think they need to make informed career and life decisions?

Career development professionals recognize the increasing number of adult students requesting assistance. If these professionals are to meet the needs, they must first answer the question, "What career services do adult students need"? This study, based on data gathered through individual interviews with adult students enrolled at four colleges in Ohio, provided an answer for the participants involved. By describing their experiences these adults conveyed their uniqueness, and therefore the requirement for individual counseling and assistance in meeting their career development needs.

The definition of adult student used for this study acknowledges the multiple roles and responsibilities of adults (Keierleber & Hansen, 1992). The definition used "includes students who have stopped out of college, who attend college part-time, who hold full-time or part-time jobs, who have established their own homes, and who have assumed primary life roles other than that of student" (Polson, 1989; in Keierleber & Hansen, 1992, pp. 312-313).

Emerging Perspective on Career Change

Whereas a career, defined by Arthur, Hall, and Lawrence (1989) as "the evolving sequence of a person's work experiences over time" (p. 8), could formerly span a working lifetime, it is predicted today that the average person may have three or four careers in the span of his or her work life (Hall & Mirvis, 1995a, 1995b). There is ample evidence that the level of education needed for an individual to continue being productive in the American workforce is changing. According to the 1999 *Almanac Issue of the Chronicle of Higher Education*, 42.6% of all students attending institutions of higher education in the fall of 1995 were over the age of 25.

In addition to higher educational requirements, there is also evidence that the number of developmental stages of adulthood, as have been described for the last two decades, are also increasing and changing. Results of

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research conducted over a seven-year period on the life stages of adults were reported in a popular press book, entitled *New Passages* (Sheehy, 1995). Sheehy believed there are more stages adults traverse than those Levinson, Darrow, Klein, Levinson, and McKee (1978) proposed in their study of the stages of adult male development. The societal expectation during the time of Levinson's study was that career and life choices made during adolescence and early adulthood would lead to a fulfilling existence over a span of several decades (Levinson et al., 1978). Reality is that today's society has changed and not everyone proceeds through the stages at either the same pace, or in many cases, the same order. As individuals are trying to build satisfying lives, making career choices has become an activity engaged in throughout the life span.

Broader Context of Career Change

Many researchers have studied the causes of midlife career change, especially the motivation prompting the change. External factors, such as technological, economic, and social changes are causing career transitions. Internal issues, both interpersonal and intrapersonal, cause many adults to seek new career challenge – the desire to expand marketable skills, enhance self-fulfillment, and seek new purpose in life (Boyett & Conn, 1991; Chiappone, 1992; Glassner, 1994; Merriam & Clark, 1991). Rapid technological advancement, shifting demographics, rising educational levels of the American populace, increasing numbers of dual-career couples or families, changes in working conditions and cultures within our organizations, and an increasingly global economy are among these factors (Boyett & Conn, 1991; Brown & Minor, 1989; Chiappone, 1992; Drummond & Ryan, 1995; Glassner, 1994; Gutteridge, Leibowitz, & Shore, 1993; Herr & Cramer, 1996; Horton & Engels, 1992; Keierleber & Hansen, 1992; Montana & Higginson, 1978; Vondracek, Lerner, & Schulenberg, 1986).

Expanded Concept of Career Success

The concepts of career development and success have changed as a result of the factors stated above. The literature is replete with definitions of career development, especially as it relates to adults. The literature of the past decade emphasizes change and content as common themes. Another common theme is that the goals set and decisions made regarding career and life issues must be made in the context of the person's individual situation (Abrego & Brammer, 1992; Lea & Leibowitz, 1992; Levinson et al., 1978; Vondracek et al., 1986). These decisions and goals must be constantly reevaluated since the context within which one performs her or his profession is in constant flux.

Required Set of Expanded Skills

As we approach the twenty-first century, it is apparent that acquisition of a new array of technical and professionals skills will be required on a continuing basis (Herr, 1990; Mirvis & Hall, 1996). There is also an additional set of skills required, that of managing one's own career.

We are becoming a society of lifelong learners, not only to remain competitive in today's marketplace, but also to increase our feeling of fulfillment in life. There are many ways in which adults are increasing their job skills and their overall knowledge. Many employees are taking advantage of on-the-job training and educational reimbursement programs offered by their organizations, which pay registration fees, books and materials, and sometimes travel expenses. Many of these adults are pursuing additional education to achieve a more complex set of goals. These include more productive and effective involvement in community problem solving, striving for personal satisfaction, sharing expertise, and meeting new people (Lewis, 1988; Schlossberg, Lynch, & Chickering, 1991).

Implications for Career Services Professionals

As the need for career change is recognized, many adults are finding themselves in transition, rethinking their skills, interests, aptitudes, and life goals. Of those seeking further education, many will require assistance in making choices about their educational experience and related issues.

These adult learners will seek assistance from career services professionals on campus, at their present employer, or through private services. As career development professionals respond to the increase in adults making career changes, it is important that these professionals come to appreciate the services that are required by this population. Because the issues are unique to each adult at each stage of his or her educational pursuit or career change, the questions posed and the goals sought were ascertained through qualitative research.

Included in the literature review conducted prior to commencement of this research study, were the theories of adult career development, career development, adult development, adult learning, as well as the characteristics of adult students and possible interventions.

Methodology

As stated earlier, the purpose of this study was to ascertain from adult students on the campuses of four Ohio colleges and universities their perception of their career development needs. The research methods chosen for this study are qualitative and were based on a naturalistic, constructivist paradigm (Guba & Lincoln, 1989; Lincoln & Guba, 1985). Creswell (1994) defined the qualitative paradigm as "an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting" (pp. 1-2).

Research Design

True to naturalistic inquiry, the design of this study continued to evolve as the study progressed. Major steps in the process were identified, however, prior to the beginning of the study. Using techniques of purposive sampling, ten participants were selected and interviewed, interview transcripts and other documents were analyzed, the trustworthiness of the data was addressed, and the case report was written. The researcher, true to the naturalistic paradigm, continued to alter the design and questions as indicated by the ongoing data collection and analysis process.

One Ohio institution of higher education was chosen from each of the following Carnegie (1994) Classifications: research, doctoral, comprehensive, and associate degree granting institutions. The sites were chosen based on the willingness of gatekeepers to participate. The four participating institutions will remain anonymous, remaining true to the design of a naturalistic inquiry. The gatekeepers for this study were the Directors of Career Services on each campus.

Two sampling techniques were utilized for the selection of participants. The first was criterion-based. The researcher wanted to include in the study a diverse group of adults from four different types of institutions within the state of Ohio, men and women, Caucasians and African-Americans, full- and part-time students, individuals employed full- and part-time while attending school, and students who were at different stages in both their educational pursuits and career decision-making processes. The second sampling strategy utilized was the network or snowball technique. At the conclusion of each interview, the participant was asked to suggest the names of adult students who may have had different experiences than their own in their quest for career development assistance, or who had needs for which they had not sought assistance.

The ten participants represented the criterion variables (i.e., gender, ethnic heritage, class rank, part- or full-time [both student and employee], and career and life issues) that were established prior to participant selection. Among the participants, there were seven women and three men; two of the women were African-American and the other eight participants were Caucasian. Two participants had completed associate degrees and were beginning the process of identifying appropriate baccalaureate degree programs, three others were also undergraduate students at the time of our interviews, four had completed baccalaureate degrees, and one had just completed the requirements for a Master of Arts degree.

Three of the participants held full-time jobs while studying, with seven of the participants holding one or more part-time jobs. Six participants stated that they had been active as volunteers during their courses of study.

Some of the participants fluctuated between attending classes part- and full-time, partly as a result of their financial resources. Four participants had been both full- and part-time students, the other six had attended only full-time.

"The instrument of choice in naturalistic inquiry is the human" (Lincoln & Guba, 1985, p. 236). The collection of data and subsequent analysis is conducted solely by a human researcher, who brings to the process a set of values and a lens through which reality is seen. These values and lenses are a part of the researcher that is always present. As the data were collected and analyzed by reviewing written documents (questionnaires and resumes), engaging participants in conversation (semi-structured interviews), observing behaviors, and categorizing information, the values and lenses of the researcher remained a vital component of the process. The human instrument was continually analyzing data as it was collected, both on-and off-site, as well as during the more formal process of analysis conducted following interviews and observations.

Four primary sources of data were utilized in this study: demographic questionnaires, resumes of potential participants, semi-structured interviews, and observations. Information provided in the questionnaires and resumes provided background data and served as conversation starters for the interviews. The intent of the interviews was to obtain information from each participant regarding his or her career decisions, to articulate the present status of career decisions, and to determine the needs each perceived in making career decisions. The following are sample questions used in the initital interviews:

- I'd like to begin by asking you to tell me about major life and career decisions you hav made. Include in your description the significant events and people who have influenced these decisions.
- It is important for me to understand your thinking about your career. How do you define "career"? Please tell me what "career" means to you.
- As you think about the decisions you've made thus far, can you identify any factors that facilitated your career choices?
- What hurdles can you identify that you have encountered in your decision making process?
- What prompted you to pursue additional education at this point in your career? What do ;you hope to accomplish as a result?
- What do others who are important to you think about what you are doing now (i.e., attending classes, contemplating career change)?
- I'd like you to reflect on and describe how and where you think your career fits into your total life picture.
- What kinds of information do you believe you need to make logical, rational, informed career and life decisions?

Observations made during the interview process were recorded via hand-written notes taken during and immediately following the interviews. Analysis of the data was a process of identifying categories and themes and making sense of them as constructions of the participants. The constant comparative method was used in the analysis of all data gathered during the course of this study.

The constructions evolving from the realities of the participants in this study, as obtained through document analysis, interviews, and observations, member checking, log keeping, and peer debriefing, were reported using the case report method. Because the purpose of this study was to describe the perceptions of adult students regarding their career development needs, the major emphasis of the case report is descriptive. The data gathered were analyzed and interpreted so that the researcher's construction, and the multiple realities of the participants, may be shared with the readers.

Results and Findings

Career development specialists have made assumptions about the needs of adult students. Many have asserted that the needs of adults are unique and the traditional methods of career guidance may not be appropriate. Assumptions are made that adults, by virtue of age and working experience, know about their own interests, abilities, aptitudes, values, etc.; requirements of various work environments; how to make logical decisions; and how to implement those decisions, once made. While each of the participants in this study possessed life and work experiences, each demonstrated unique needs as he or she confronted academic, career, and life decisions. Some displayed a need for assistance in learning about and integrating knowledge of self with the world of work. Others had obtained and internalized this information, but required assistance in decision-making. Still others had made a career decision, but were unsure of appropriate implementation strategies.

Although some of the adults in this study could articulate the needs for assistance stated above, most were ignorant of the resources available to them on their college campuses. One of the only areas that participants could articulate needing assistance in was job hunting and career implementation.

Others did not realize that they even had needs that could be met with the assistance of Career Services practitioners. They were not aware of their own needs for self-assessment, exploration of occupational information, or obtaining decision-making skills.

Individual career and life profiles were written for each of the ten participants in this study. General information was included regarding their personal career definitions, goals, reasons for making a career transition, life roles, obstacles encountered, motivation to continue working toward their goals, and support received from significant others.

Four themes evolved during the process of analysis and were categorized using the following broad labels: the need for self-awareness, occupational knowledge requirements, need for decision-making strategies, and challenges to career implementation. Within each broad theme are sub themes

The findings of this study are discussed in relation to the major themes identified during analysis of the data. Although these themes could have been predicted, the interrelatedness of these themes as described by participants in this study, demonstrated a complexity not implied in the literature. Therefore, a *Web of Personal Career Reality* © 1997 was created to portray more accurately this complexity. The career choice factors (e.g., multiple roles, past work experience, lack of self-efficacy, limited occupational knowledge, and poor decision-making skills) included in the themes are frequently not presented to career practitioners by adult students in a prescribed, linear sequence. As a result, assisting these students with career and life decision-making is extraordinarily complicated. The *Web* can provide the framework for assisting adult career changers with the diverse factors required during their decision-making processes.

At the center of the *Web* is the individual's perception of his or her career and life vision. Surrounding this core are the four major themes, with related sub themes, which emerged during the analysis of the data. Also included around the core are factors that can have a direct influence at each stage of the decision-making or career implementation process. The many two-directional arrows signify the interconnectedness of all of the variables. Although adults may request assistance with finding a job (career implementation), thinking they are at step four of a four step process, use of the *Web* can promote an understanding that more self-exploration and investigation of occupational requirements and environments may be needed.

True to naturalistic inquiry, these findings are not intended to be generalizable beyond the participants of this study. Therefore, the readers are encouraged to compare the situations of the adult career changers with whom they are working to the participants in this study. This comparison will help to determine the transferability of the implications and suggestions to their own settings.

Findings: Need for Self-Awareness

In the broad theme of self-awareness, it was found that the participants varied significantly in their levels of self-understanding, self-concept, self-efficacy, and in their personal definitions of career. They also differed in the number and types of roles and responsibilities assumed. Individuals with a higher degree of self-awareness were more directed and clear in their choices of academic major and career field. Several of the participants could not articulate their own career development needs, especially those whose self-efficacy in their chosen academic major or career field was low. For some, the issue of career choice that would have a direct impact on broader life issues, and their discomfort with the possible outcomes was intrusive, permeating every facet of their lives.

The personal definitions of career varied based on the unique developmental history of each individual. For some, the definition of career, formulated during the adolescent years, had remained unchanged. For others, the concept had continued to develop throughout their working lives, reflecting their desire for personal growth and career change. Some of the participants never thought of themselves as having a career, they were engaged in jobs to survive. Others entered an occupation, which had been chosen for them by parents, teachers, or high school guidance counselors, without much thought or reflection by the participant.

The adults in this study made career decisions based on limited self-knowledge, usually using only the understanding of their interests. A few had considered their own values and those of family members, as well as how those values had changed over the years, as the participants had made decisions to change careers. Very few of them had consciously considered their aptitudes and skills, or those required in their chosen career fields.

There was evidence provided by each participant that the entanglement of career and life issues caused consternation during the exploration and decision-making processes. As participants recognized dissatisfaction in their work lives, and reassessed personal and societal values, many sought new career challenges to enhance self-fulfillment and to satisfy their desire for new purposes in life. Every participant expressed some level of dissatisfaction with his or her position, and a desire to enter a career field in which a difference could be made in the lives of others.

The participants in this study described their involvement in a variety of roles and responsibilities in addition to that of adult student and career changer. They also displayed a diversity of developmental stages in which they were engaged, and an array of levels of achievement. As could be expected, there were also a number of personality types, needs, values, and interests demonstrated during the course of our interactions.

Findings: Occupational Knowledge Requirements

The participants in this study demonstrated a very low level of occupational awareness. Most were basing their decisions on limited occupational knowledge and occupational stereotypes. There was very little evidence that participants had used standardized career information resources describing career fields of potential interest. Only a few of the participants had spoken with professionals in their targeted occupations.

The few who stated that they had some understanding of their career field, however, still could not demonstrate their understanding of the day-to-day activities, skills required, specialized knowledge needed, or working conditions to be expected. A compounding factor to this lack of information was their unfamiliarity with campus or community resources where they could obtain realistic occupational information.

Findings: Need for Decision-Making Strategies

Many adults today are unaware of both their own potential occupational preferences, and the skills required to make career decisions. This is a direct result of earlier perspectives on vocational guidance that assumed that once a career decision was made in adolescence, there would be no need for further action in this area. For most of the participants in this study, early career decisions had been so strongly influenced by others that these individuals were not conscious of having made those decisions. A few stated that others had made the decisions for them. The consequences of having had others make these decisions included career dissatisfaction, lowered self-esteem, and a sense of not fitting the work environment.

Although the participants in this study all reported having returned to higher education to make career changes, few could articulate the process they had used to make their choices of either academic major or career field. A very narrow exploration of options followed the recognition and acknowledgement of dissatisfaction with their career situations. In most cases, participants had become aware of one option they thought viable, and without further exploration, initiated the steps to prepare for that career.

It was also evident that not all of the participants had considered the outcomes possible as a result of their efforts in obtaining additional education. Some, however, stated clearly what they expected to occur as a result of their efforts.

Findings: Challenges to Career Implementation

Although the participants in this study had not found a need for continuing education in their previous occupations (with one exception), many anticipated that in the future additional education would be incorporated into their lifestyle. There was limited evidence, however, that the participants in this study had the skills to engage in a planned process to change or manage their own careers. When asked specifically about their career development needs, the participants cited only their needs for assistance in the job search process, even though some were still in the exploratory stages.

One theme that was consistent with all participants was their lack of knowledge of the breadth and depth of academic and career advising services available to them on their college campuses. A few of the participants stated that they did not know there was a Career Services Office on their campus; others had heard of the office but had the impression that the services were limited to assisting students with resume writing, interviewing skills, and job search activities.

Implications for Practitioners and Significance to the Field of HRD

As adults attend colleges and universities in increasing numbers, it is important that career practitioners, in addition to a thorough understanding of career theory and counseling techniques, learn about adult development theory and integrate its principles into their practice. It is also imperative that career practitioners understand the characteristics of this population of adult students and their needs (Gianakos, 1996; Goldstein, 1984; Keierleber & Hansen, 1992; O'Connor, 1994; and Whitt, 1994).

Due to the qualitative methodology used in this study, there were a number of questions that emerged, which, if studied further could provide valuable information for career development professionals. The information gathered from these ten participants provides a basis from which larger, more comprehensive studies will be conducted.

The intent of this study was twofold: to explore and discover the career development needs of adults students and to help career development professionals gain insight into and understanding of the unique needs of the individuals in this growing population. Using qualitative methods, ten adult students were interviewed to obtain their perceptions of their own career development needs. Also discussed were ways in which these needs had been or could be met by the available career development professionals on their respective campuses.

These ten individuals freely disclosed information regarding their struggles to address their complex career and life issues. It is hoped that the information obtained through this disclosure will assist Career Services professionals in understanding and appreciating the uniqueness of each adult student. This insight into the lives of these ten students can be useful to Career Services professionals in their efforts to design programs and services which are responsive to all student needs. It can also be useful to researchers as we continue to explore the needs of adult career changers on a larger scale through further research.

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Mid-Life Mid-Career Renewal - An Outcome of Involuntary Career Transition as Experienced by Federal Employees

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Organizational and career stability are challenged by the complexities of the modern workplace. Mid-career federal workers who had lost their positions through downsizing were the subjects of this qualitative study. Data was generated through in-depth interviews and theme analysis. The study confirms the existence of a mid-career renewal stage, triggered by an involuntary career transition, and affected by factors related to the inner self, the personal and work environment, and the transition process.

Keywords: Career Renewal, Mid-Life, Downsizing

This phenomenological study dealt with mid-life, mid-career federal workers who, when faced with an involuntary career/job transition, went on to turn the experience into a vehicle for successful career renewal and growth. For the purposes of this study, career renewal was defined as the generation of a new career self-concept (Super, Savikas & Super, 1996; Super, 1957, 1980, 1990) through reconsideration of motives, inner values, abilities, and interests as they coalesce into themes for the individual's life (Abrego & Brammer, 1992; Murphy & Burck, 1976.) Results of the research provide an understanding of the phenomenon of career renewal, identify factors which facilitate or inhibit the career renewal process, and provide suggested guidelines for use by human resource professionals and career counselors charged with facilitating the transition process (Greller & Stroh, 1995; Hall & Mirvis, 1995.)

Problem Statement

There are few studies exploring the meaning of mid-life, mid-career renewal as experienced by workers who have been affected by involuntary separation (Abrego & Brammer, 1992; Greller & Stroh, 1995; Latack & Dozier, 1986.) There are fewer still which attempt to determine the nature of this experience for federal employees who joined the workforce expecting a stable work environment and a progressive linear career path (Atwood, Coke, Cooper, & Loria, 1995; Latack & Dozier, 1986.) This body of workers has operated for over a century in a work setting governed by generally protective guidelines and regulations. Provisions of employment were well known, well publicized, and often perceived as a pivotal reason for choosing federal employment (Whitehead, 1996.)

In recent years, however, efforts to downsize the federal government became prevalent and substantive, culminating in the establishment in 1993 of the National Performance Review (NPR) with the goals of organizational restructuring, creating a less expensive and more efficient federal government, and alteration of the culture of the national federal bureaucracy (National Performance Review, 1993, 1997.) For the first time in recent history, massive federal downsizing and Reductions-in-Force were initiated. Mid-level positions, in particular management and supervisory positions, were specifically targeted for abolishment.

Despite the large numbers of individuals affected, and the significant implications of these actions, there is no clear understanding of what the involuntary separation means to those federal employees who experience it, the impact on individuals forced out of their jobs. Nor is there a sense of how some of the affected individuals turn this event into an opportunity for career renewal, while others do not. What differentiates the successful response from the less successful? How are successful career renewal journeys accomplished?

The current employment market environment and relative lack of intensive research into the topic of involuntary mid-life career transitions (Greller & Stroh, 1995; Latack & Dozier, 1986) highlight the need for a more complete understanding of the phenomenon. Along with the potentially negative and traumatic effects, forced career transition also brings the potential for career renewal and personal growth, including the reappraisal of previous vocational choices.

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reformulation of the role of work in the life plan, renewal of career commitments and development of new career strategies (Bejian & Salomone, 1995; Eby & Buch, 1995; Murphy & Burck, 1976.) How individuals respond and react to these challenges will impact their ability to move successfully into other stages of their careers and their lives. This study is designed to provide suggested answers to the problem.

Theoretical Framework

The bases for this study are the theoretical principles of career development, studies of individuals at mid-life, transition theories and reviews of organizational downsizings. This research has theoretical significance because of the current focus on redefining careers (Rifkin, 1995; Bridges, 1994), and the nature of the employment contract which has changed so dramatically over the last ten years (Drucker, 1995; NPR, 1993, Rifkin, 1995.)

Much of the existing career theory deals with initial career choice which is presumed to be followed by upward progression in a stable organizational setting. Scant attention is paid to mid-life career issues (Abrego & Brammer, 1992; Greller & Stroh, 1995.) Until very recently, a common assumption existed that, by mid-life, individuals were settled in their careers, meeting their generativity needs by mentoring younger workers, and no longer feeling the impetus to explore new career possibilities of their own (Erikson, 1963; Gutteridge, Leibowitz & Shore, 1993; Levinson, 1986; Levinson Darrow, Klein, Levinson, & McKee, 1978.)

Donald Super, one of the best known developmental career theorists, described the stages of a career in a sequential mode: exploration, entry, establishment, maintenance and disengagement (Super, 1957, 1980.) Subsequent career related research indicated that the middle years of a worker's life involved much more than maintenance. Murphy and Burck (1976) proposed that an additional stage - renewal - be placed between establishment and maintenance. Subsequent revisions were made to Super's model (Super, 1990; Super, Savikas & Super, 1996) but, as is true in much of the career literature (Greller & Stroh, 1995), little attention is given to involuntary disruption of the career path.

Downsizings (Balutis, 1996; Cameron, 1994; Lacey, 1988; Rifkin, 1995) often cut short the mid-life processes described in these existing career models, and force the affected individual to develop transition strategies (Latack, 1990; Latack & Dozier, 1986; Sargent & Schlossberg, 1988; Schlossberg, Waters, & Goodman, 1995) if they are to have a successful experience. While transition theories are helpful, however, their focus is primarily on re-employment, not necessarily fulfillment and renewal.

Today's career patterns must be viewed in a different light. The focus must be on growth, rather than decline, as a outcome of unforeseen change. The issues under review are central to a wide body of knowledge regarding involuntary mid-career transition and successful career renewal. This study addresses the means through which a successful career renewal was achieved. Empirical applications exist, in that lessons learned from this study of federal employees may be applied to other settings and to the issue of the changes in the implicit psychological employment contract.

Research Questions

1. How is involuntary career transition related to the establishment of a renewed career self-concept during mid-life?
2. How has the mid-life career renewal become a part of the larger process of adult development for the individual?
3. How was the successful completion of the career renewal process related to the level of support received from others during the process itself?
4. How did situational factors such as prior experience, financial resources, the manner in which the downsizing was handled by the employer, and other concurrent stresses impact on the meaning of the career renewal experience for the individual?
5. How did personal and demographic factors such as length of tenure, and state of health; and psychological factors such as commitment, values and a sense of control over the process contribute to the career renewal?
6. What strategies (job search, self-assessment, additional training/education, coping mechanisms) were employed by those who experienced a successful career renewal?

Methodology

The phenomenological method was employed in this study. Individuals who had been affected by involuntary job loss served as both co-researchers, contributing to the generation of ideas, providing insight and drawing conclusions; and as co-subjects actively participating in the activity being studied (Reason, 1994.) Through the vehicle of an in-depth interview, these individuals described their career renewal experiences in the context in which they occurred.

Each co-researcher had a minimum of seven years consecutive federal experience and was between 40 and 55 years of age. The primary researcher contacted federal outplacement centers in Maryland, Virginia, and the District of Columbia; described the nature of the study; and requested referral to individuals meeting the study parameters. Career counselors who had assisted in career transition efforts in federal agencies were also contacted. In addition, co-researchers often suggested other possible participants. An introductory letter describing the study and requesting an expression of interest was sent to prospective participants. Preliminary interviews were conducted with fifteen individuals; ten participated fully in the research. Prior to beginning the study, the primary researcher also conducted pilot interviews with two individuals meeting the study parameters. Results of the pilot interviews were used to refine the research method.

Using the research questions as a framework, the primary researcher conducted in-depth interviews, averaging one and one-half hours in length. A verbatim transcript was produced. Co-researchers' individual career renewal stories were elicited, while not omitting consideration of certain factors directly related to the study, specifically the federal employment milieu (Moustakas, 1990; Rubin & Rubin, 1995.) Both the researcher and the co-researchers guaranteed confidentiality of the interview, each of whom signed a statement describing their understanding of the purpose and parameters of the study.

From the verbatim transcripts, the primary researcher developed narrative Profiles in the co-researchers' own words (Seidman, 1998.) She then grouped passages from the individual profiles into categories and looked for emerging thematic connections (Boyatzis, 1998; Kvale, 1996.) The individual profiles and suggested themes were reviewed by the appropriate co-researcher and modified if necessary to be certain that the essence of the experience had been captured. A sample of the profiles was also reviewed by a third party researcher to confirm the trustworthiness of the grouping of themes and the meanings constructed. General themes related to the research questions were formulated using the individual themes as a base. Bracketing was employed to facilitate suspension of the primary researcher's own conscious biases (Douglas & Moustakas, 1984.)

Limitations

While the study itself is limited to federal employees, this population is comprised of individuals who entered the workforce with explicit expectations regarding the provisions of their employment, including tenure requirements and ensuing benefits, and thus represents others of their generation. The study population is, therefore, representative of mid-career employees who must come to terms with an employment market which differs in many important respects from that which existed when employment began.

Results and Findings

Seven major themes emerged from the interviews. The majority of the co-researchers mentioned these themes as having a significant relationship to the career renewal process. They are grouped here in accordance with the issues raised by the research questions.

Establishment of a Renewed Career Self-concept during Mid-life

(1) The Reduction-in-Force (RIF) served as a trigger in the development of a renewed career self-concept, and the re-examination of the role of work in the life plan. In most cases, this process had already begun prior to the RIF. The loss of a job gave this re-examination more urgency.

(2) During the renewal process, the role of federal employment in the career self-concept was re-evaluated. Federal service had been a large component of the co-researchers' career self-concept. This component is either no longer present, or the expectations of mutual loyalty which underpinned that part of the identity no longer exist. A successful career renewal experience requires acceptance of the realities of the newer work environment.

Mid-life Career Renewal as Part of the Larger Process of Adult Development

(3)The co-researchers have a high level of commitment to work, and seek meaningful careers of value to themselves and the community. Successful career renewal incorporated a mid-life review of values and goals. These goals included a wish to "give back" to others, realized through conducting transition workshops, mentoring/supporting others in similar situations, and/or by hiring other downsized individuals once the co-researcher had obtained new positions.

Level of Support Received from Others

(4) The co-researchers sought and received support from others. Support from family, but particularly from professional networks and colleagues, was a key theme in these experiences. These networks and colleagues served as sources of validation and insulation against the tendency to feel like a "failure" because of rejection by the downsizing agency.

Impact of Situational Factors such as the Manner in Which the Downsizing was Handled by the Employer and Other Concurrent Stresses

(5) The importance of being treated with respect by the downsizing organization and by professional colleagues is recognized. Open and honest communication and the provision of career transition services in recognition of the special issues being faced by the downsized employee were significant. In cases where these elements were present, the trauma to individuals was mitigated. Where these factors were not present, the negative effects persisted.

(6) Factors related to personal/lifeplan issues and the co-researcher's approach to these factors had an effect on the experience. Factors with a negative effect included health issues for the co-researcher herself, as well as death of close family members during the transition period. More positive effects resulted in those cases in which the co-researcher had kept marketable skills up-to-date, or had prior experience with downsizing situations.

The Contribution of Factors such as a Sense of Control Over the Process and Development of Effective Strategies

(7) The initiative employed by the co-researchers in developing strategies and coping mechanisms played a significant role in their career renewal. The level of adaptability and resilience, accompanied by a sense of self-efficacy and internal locus of control, guided the co-researcher down a successful path to renewal and reinvigoration in mid-life.

These themes do not exist discretely. Many themes overlap, and it is often difficult to place a certain piece of the experience in one theme or another. These individuals all describe the downsizing in serious terms, as an event with a lasting impact on their personal and professional lives.

Conclusions and Recommendations

For many of the co-researchers, this experience included periods of self-doubt, and the reappraisal of previous vocational choices as described by Aslanian & Brickell (1980.) This reappraisal is exhibited in differing ways in the different narratives. These differing ways include reformulation of the role of work in the individual's life plan, the development of new career strategies, and re-commitment to the original choice similar to the findings of Bejian & Salomone, 1995; Eby & Buch, 1995; Murphy & Burck, 1976.

Never-the-less, common themes emerge which are applicable across the individual experiences related. Review of these common themes demonstrates that the manner and degree in which career renewal is experienced is affected by factors related to the inner self, to the personal and work environment, and to the transition process itself. These conclusions, and respective sub-conclusions, are presented below.

The Role of the Individual

(1) Mid-life career renewal, initiated as a result of an involuntary career transition, is part of the lifelong process of occupational choice. Many co-researchers had already begun a mid-life re-examination of career goals and the relative place of career in their larger life plan. The downsizings provided the opportunity to think about the meaning of work and the role of work in their lives.

(2) The initial commitment to public service through the vehicle of federal employment is re-focused and directed toward other avenues of expression. The successful career renewers have incorporated to treat downsized employees respectfully into how they deal with their own employees, how they carry the message to others, and in their choices of service-oriented new careers.

(3) Adaptability, resilience and a sense of personal control over the outcome provides a sense of liberation and facilitates career renewal. Knowing themselves, their transferable skills and their ability to exert control over their own careers were all part of the peak experience of career renewal for those in this study.

The Personal and Work Environment

(1) In order to experience successful career renewal, the changing nature of the employment contract must be accepted and embraced. Their federal careers had become major components of the co-researchers' sense of self-worth and personal identity. Their experiences teach them that employee loyalty and organizational tenure are not so important to employers as they once were, and that the nature of careers and employment contracts have altered.

(2) Career/lifeplan issues outside of the organizational setting impact the process. Factors present in current life situations, such as their own health and that of their parents, concern about financial issues and individual qualifications and prior experience all play a role in the relative smoothness of the career renewal

The Process Itself

(1) Being treated with respect by the downsizing organization has a positive effect on the career renewal experience. Properly implemented organizational support and open and honest communications with those being let go facilitated the retention of self-esteem and development of appropriate strategies.

(2) Support from family, colleagues and professional networks helps mitigate the "dark side" of the transition/renewal journey. As part of their career renewal experience, the co-researchers developed sources of support to overcome the obstacles in their path, and to integrate their career dreams and goals into the realities of the new work environment. Professional networks and colleagues served as sources of validation and insulation against the tendency to feel like a "failure" because of rejection by the employing agency.

Recommendations for Further Research

(1) Since this study focused on federal employees, further research is suggested to discover if involuntarily separated employees in other sectors of employment describe similar experiences.

(2) Because of the nature of the population from which the co-researchers were chosen (age and tenure considerations) the co-researchers were all in the mid-to-upper grade ranges (GS-9 to Senior Executive.) Further study could be done with employees at lower grade ranges and ages.

(3) While the male and female co-researchers shared similar experiences, there were some gender differences noted. For example, females were more likely than males to report receiving substantive support from others during the transition period. Further study could be conducted to explore gender differences.

(4) Internal locus of control was an important factor in successful career renewal for the co-researchers in this study. Further research needs to be done to develop mechanisms to enhance the feeling of control over transition outcomes.

(5) The perception of open and honest communication with management and the provision of effective professional career transition services had a positive effect on the experiences related in this study. A research project could be conducted to contrast experiences of those who receive services with those who did not.

(6) None of the co-researchers had the benefit of support groups specifically centering around the experience of mid-life, mid-career job loss. Further study could ascertain the impact of such groups.

(7) With the exception of one Hispanic female, all co-researchers were Caucasian. Further study should review the possibility of differing experiences for those in various ethnic and racial groups.

Contributions to New Knowledge in HRD

This study has practical significance for human resource professionals, career counselors and individuals affected by downsizings in mid-career. The results provide human resource professionals with guidance to be used in implementing future downsizings. Career counselors can use the findings in helping outpaced employees (and others in mid-life) develop new definitions of careers and implement reconceptualized career plans. For individuals who will be affected by downsizing in the future, particularly - but not limited to - employees of the federal government, this study provides insights into the manner in which others in a similar situation have achieved a measure of career renewal. The implications of this study are also relevant to individuals who are making voluntary career changes and/or experiencing career/life transitions.

Human Resource professionals are instrumental in developing training and information for employees which outline the realities of the new workplace. Their responsibilities should include developing materials and workshops which highlight the new ideas of career, the changing nature of employment, and the importance of keeping skills up to date and taking control of one's own career. Career Centers can be established to provide all employees, not just those experiencing job loss, with an opportunity to learn how to successfully manage a career change. Issues covered could be the examination of career related values, discovery of the relationship of other lifeplan issues to career, and exploration of the meaning of work for the individual being counseled. If an organization encourages continuous attention to career issues, employees may begin considering a transition long before external pressures forces them to do so. These kinds of transitions allow for downsizing by attrition and help assure the staffing of the organization by employees with the competencies required at that time.

The manner in which the organization handles the downsizing plays an important role in the career renewal process. If separated employees are treated with respect, provided with support services and, above all, not "shunned" by management and co-workers; they will have a more successful experience. This will result in fewer incidents of workplace violence and destruction of property by those departing. HR professionals can take the lead in establishing lines of communication, such as e-mail, printed material, telephone conferences, etc. It is incumbent upon management to ensure that these communications accurately reflect the position of the organization, where any cutbacks will be effected, and what other restructuring options are being considered.

In planning and implementing future downsizings, human resource managers can stress the importance of an analysis of workload distribution and other similar techniques prior to any decision on the types and numbers of positions to be eliminated. While the total numbers of employees will always be an issue, the focus needs to be on keeping organizations as lean and as efficient as possible, not on reducing numbers just to be able to say that a layer of management or a particular function has been eliminated.

While the experience of the RIF may not ever be a totally positive one, measures such as these will mitigate the negative feelings and encourage employees to expend their energies positively, re-looking their career objectives and taking appropriate steps to achieve them, rather than allowing the negativity to fester.

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The Role of Acculturation in Career Advancement among Hispanic Corporate Managers

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This qualitative study investigated the role of acculturation in career advancement and the ways in which Hispanic corporate managers have advanced their careers, and then compared Mendoza's (1989) theory of acculturation to the propositions derived from the data collected from this study. The findings revealed that Hispanic corporate managers viewed acculturation and career advancement as directly related to each other. Mendoza's theory of acculturation was substantiated by the findings.

Keywords: Diversity, Acculturation, Cross-Cultural HRD

Problem Statement

This study proposes that a link exists between adaptation to the host culture and career advancement in the corporate arena among Hispanic corporate managers. The phenomenal surge of the Hispanic population in the United States has escalated the interest in acculturation in the workplace and the representation of Hispanics at all levels of the organization. The U.S. Labor Department forecasts that by the year 2015, Hispanics will have become the largest ethnic minority group in the United States. Exter (1987) estimated that the Hispanic minority would eventually become larger than all other minorities combined. Crispell (1990) recognized that the number of Hispanic workers could increase at a rate more than four times the rate of white, non-Hispanic workers by 2000. As the number of Hispanics in the United States has continued to increase, legal statutes such as Title VII of the Civil Rights Acts of 1964 and the Executive Order 11246, have been rigorously enforced in order to ensure equal opportunity employment practices in the workplace. However, it is surprising to note that in a 1994 tally of U.S. government positions, only 80 or approximately one percent of Hispanics had been appointed to Senior Executive Service positions (Mendosa, 1994).

Because of the increasing Hispanics in the workforce and the legal issues of employment practices, several significant problems have emerged. These include: 1) few effective diversity and acculturation management training programs for Hispanics; 2) non-acculturated Hispanics who have higher job termination rates; 3) conflicting work values which exist between Hispanics and non-Hispanics; and 4) job discrimination issues which Hispanics face.

Human resource professionals and corporate management have found it difficult to assist Hispanic corporate professionals to compete effectively in the Anglo workplace due to a dearth of research-based strategies. The proliferation of management and diversity training programs has not been strongly supported by theoretical and research development (Cox, 1993). Additionally, these educational packages have been geared toward an Anglo audience in order for Anglos to learn to work with individuals from diversified backgrounds. While these training programs have focused on diversity, no efforts have been made regarding acculturation training (Cox, 1991). Although an extensive body of research exists on acculturation, there is little which relates acculturation to the domain of work-related issues. However, from the small number of studies that have been published, it appears that there is a positive relationship between the domains of work and acculturation (Edwards, Rosenfeld, & Thomas, 1990; Chavez & Buriel, 1986; Domino & Acosta, 1987).

Edwards, Rosenfeld, and Thomas (1990) conducted a comparison study of Hispanic and Anglo blue-collar, Navy civilian employees. The findings of the study showed that acculturation is a central variable when related to job termination, with less acculturated Hispanics experiencing higher job termination after one year (Edwards, Rosenfeld, & Thomas, 1990).

Chavez and Buriel (1986) suggested that there is a difference between the value systems developed in immigrant homes outside of the United States and those developed in homes in the United States. Individuals raised outside the United States had parents who valued the outcomes of hard work rather than the work itself, whereas the United-States-born-and- raised individuals prioritized the process of working hard and de-emphasized the outcomes.

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Sanchez and Brock (1996) investigated the problem of perceived discrimination as a major stressor in the workplace. They studied 139 employed Hispanics in Miami-Dade County (Miami, Florida), with 60 percent of the participants identifying themselves as Cuban-American, the largest ethnic subgroup in Miami-Dade County. The findings demonstrated that the Cuban-Americans who grew up in the United States experienced high paying jobs, pleasant work environments, and faced the least amount of perceived discrimination.

Theoretical Framework

Historically, acculturation has been defined as a linear process in which an individual progresses along a single continuum, moving from being totally Hispanic to non-Hispanic (Gordon, 1964). This approach implies that as one is immersed into the host culture, the characteristics of the culture-of-origin diminish. Acculturation researchers tested this linear model and found that this rather simplistic framework did not sufficiently portray the multifaceted dimensions of acculturation (Szapocznik, Scopetta, Kurtines, & Aranalde, 1978; Garcia & Lega, 1979; Berry, 1986).

Mendoza (1989) developed a multidimensional acculturation model which recognized affective, cognitive, and behavioral adaptation processes, including interfamilial, extra familial language usage, social affiliation, cultural familiarity, and cultural identification. Mendoza (1989) postulated that because acculturation involves the blend of at least two cultures, theoretical and empirical frameworks must measure and delineate the degree of procurement of the customs of the host country, as well as the extent of retention of native cultural norms. Additionally, Mendoza (1989) described four typological patterns of acculturation: 1) cultural resistance, either on an active or passive level, against the acquisition of alternative cultural norms, while preserving native customs; 2) cultural shift, a replacement of provisional societal standards for native customs; 3) cultural incorporation, an acculturation of customs from both native and alternate cultures; and 4) cultural transmutation, a modification of native and alternate cultural practices to establish a unique subculture entity. Because of the extensive literature on acculturation and the limited research on how acculturation relates to work-related issues, this study integrated several noteworthy suggestions made by researchers which included: 1) Sanders and Nee (1987) suggested distinguishing between various job positions as they relate to acculturation; 2) Celano and Tyler (1991) suggested considering education level, time exposed to the host culture, age exposed to the host culture, and socioeconomic status as significant variables when analyzing acculturation; and 3) Cox (cited in Sanchez & Brock, 1996) suggested a need for research-based training to be delivered in the workplace.

Research Questions

The purpose of this study was to explore, using Mendoza's multidimensional theory and definition of acculturation, the ways in which Hispanic managers have made career advancements over their years in corporate America. This study utilized a grounded theory approach to compare Mendoza's theory of acculturation to the propositions extracted from the data of this study. The major research question of this study asked what role acculturation played in career advancement among Hispanic corporate managers. The following operationalized the major research question: 1) How do Hispanic corporate managers advance their careers? 2) How do these Hispanic corporate managers view the role of acculturation in career advancement? 3) What is the difference between someone who has acculturated and someone who has not in the workplace? 4) To what extent are Hispanic corporate managers acculturated? 5) What are the work values espoused by Hispanic corporate managers? 6) What aspects of training would be crucial for a human resource professional to emphasize in assisting Hispanic corporate professionals to attain their career goals?

Research Design and Methodology

The research design selected for this study was a dominant-less-dominant mixed methodology with the qualitative paradigm as the primary methodology and the quantitative section as an auxiliary component in the overall research design (Creswell, 1994). One of the advantages of qualitative inquiry is that it offers the researcher an opportunity to engage in an in-depth exploration of a topic. Additionally, qualitative research strives to understand the meaning of action to the informant and can offer human resource professionals a tremendous data base in which to emphasize particular methods which appear to work. The inductive nature of the qualitative paradigm provided the structure of the research, yet permitted for quantitative inquiry for triangulation purposes (Creswell, 1994).

The participants consisted of five Hispanic corporate managers who worked at a Fortune 500 organization. The researchers chose the purposeful sampling procedures, which is a strategy in which particular settings, persons, or events are selected deliberately in order to provide important information that may not be secured from other choices (Maxwell, 1996). Because a small sample was utilized, the cases were deliberately selected in order to achieve representation of Hispanic corporate managers. Careful selection to achieve ample diversity included gender, age, age of participants when first introduced to the U.S. culture, number of years of residence in the United States, position in the company, marital status, educational level, length of time employed by current employer, annual income, and number of job promotions held since the participant began working in corporate America.

Data Collection

Semi-structured interviews were conducted. Prior to this study, the researchers performed a pilot study to determine the effectiveness of the interview protocol, which was guided by questions such as: What personal characteristics do you possess that have enhanced your career? What has been the single most influential factor in your career advancement? What are some of your beliefs about how work should be done? What are your thoughts about teamwork? What strategies have you used to advance your career? As a result of the pilot study, the same questions were used on the actual interview protocols. Each participant was interviewed formally one time. The interviews lasted approximately one hour and were audiotaped and later transcribed. Four of the five interviews took place in a setting distant from the workplace. One participant specifically requested that the interview take place at the work site. After the tapes were transcribed, informal discussions took place with the participants concerning the interpretation of the interviews. In conjunction with the data collected by the interviews, the study utilized field notes, the information gathered from the Cultural Life Style Inventory (Mendoza, 1989), and a demographic questionnaire.

Since Mendoza's (1989) theory of acculturation was utilized as a backdrop to explore acculturation and career advancement, Mendoza's revised Cultural Life Style Inventory, 2.0 (1989) was chosen to collect quantifiable data to further understand the phenomenon of acculturation. This 29-item instrument measures the extent to which an individual's cultural life style is reflected on three subscales: cultural resistance (CR), cultural incorporation (CI), and cultural shift (CS) tendencies. Dominant and non-dominant cultural lifestyle tendencies can be determined by comparing the differences among CR, CI, and CS scores for statistical significance. A cultural lifestyle matrix can be obtained by identifying the most frequent lifestyle tendency (CR, CI, or CS) (Mendoza, 1989). The three cultural lifestyle subscales are derived by measuring five factors. These are: 1) intra familial language, 2) extra familial language, 3) social affiliation, 4) cultural familiarity and activities, and 5) cultural identification and pride. Acceptable levels of reliability were obtained. Cronbach's alpha reported across all factors were: .87 for intra familial language, .91 for extra familial language, .89 for social affiliation, .84 for cultural familiarity and activities and .89 for cultural identification and pride. Test-retest reliability range from .88 to .95, demonstrating significant correlations. Construct and content validity were also shown. The result of these analyses demonstrated a strong support for each: eta=.420, $p<.001$ for cultural shift, eta= .458, $p < .001$ for cultural resistance, and eta = .390, $p < .001$ for cultural incorporation (Mendoza, 1989). Mendoza postulated cultural transmutation as an aspect of his theory; however, it is not an indicator on his instrument. Cultural transmutation was identified from the researchers' field notes and observations made during the interviews.

Data Analysis

During the data analysis process, the transcribed interviews were coded and categorized, followed by member checks and theme identification. Coding, which assists the qualitative researcher in sorting the data and uncovering underlying meanings in the text (Maxwell, 1996), was inductively produced and materialized from the participants' descriptions of their career and acculturation experiences. The researchers followed the eight steps of coding suggested by Creswell (1994). First, we gathered a sense of the whole by reading through each transcript carefully. Next, we selected one document and read through the transcript, asking ourselves the underlying meaning of the interview. Third, we made a list of all the topics, clustered together similar topics, and then formed these topics into columns categorized by the major topics. We then went back through the data with the categorized columns and analyzed the extent to which the organized scheme fit and whether new categories emerged. After drawing lines between the categories to demonstrate interrelationships, we made a final decision on the categories and the paradoxes which were emerging. Each theme was then reviewed in conjunction with the research questions.

Credibility, or the extent to which the data which were collected can be supported or challenged, was established through several means. Trustworthiness was achieved through triangulation. We compared the participants' perspectives with the researchers' analyses and conclusions, and the Cultural Life Style Inventory responses. By using a dominant less-dominant combined methodology, with the quantitative data being obtained from the Inventory, we were provided with an additional source of information. Additionally, the researchers engaged in an ongoing dialogue about our interpretations of the participants' reality and meanings, which served to ensure the truth value of the data.

There are limitations to the study. First, all participants involved in this study were of Hispanic origin and more specifically, of Cuban origin, which limits the representativeness of the findings. The acculturation and career advancement experiences shared from these Hispanic managers may not be the same for managers from different ethnic backgrounds. Second, the data for this study was based on the responses of managers represented from the finance industry. The findings may or may not have been the same if the study had included non-manager participants representing a number of different industries.

Findings

The following findings were identified as a result of the data analysis: 1) Hispanic corporate managers advanced their careers by demonstrating flexibility, integrity, hard work, and good leadership skills; 2) Hispanic corporate managers viewed the role of acculturation and career advancement as directly related to each other; 3) The main difference, as noted by the Hispanic corporate managers, between acculturated and non-acculturated individuals was that the acculturated individual was deemed a more preferred employee than the non-acculturated individual. The acculturated individual was observed to be flexible, comfortable with diversity, changing with the environment, and persistent in his/her business dealings, whereas the non-acculturated individual was regarded as rigid, uncomfortable with change, easily frustrated, and consistently engaged in black-and-white-thinking; 4) Three of the five Hispanic corporate managers were more culturally shifted towards an American lifestyle. These three were more open to adaptation towards the host culture; however, one participant was profiled as culturally resistant (rejecting the host culture customs) and another as culturally incorporated (adapting towards host culture norms while preserving Cuban customs); 5) The work values espoused by these Hispanic managers included family, integrity, good leadership skills, good communication skills, and effective teamwork skills; and 6) The human resource professional, in developing a training program for Hispanic corporate professionals, needs to emphasize principles of teamwork, leadership skills, communication skills, diversity training, and ethical standards for the workplace.

Recommendations and Research Contribution for HRD Practice

While this research was originally intended to result in the development of a new theory that combined the domain of acculturation with the domain of career advancement, the researchers used the data to generate four propositions regarding the interaction of acculturation with career advancement. The intent of these propositions is to serve as a resource for researchers and practitioners to view career advancement among minority corporate professionals from a unique perspective.

While the data collected were compared to the theory of acculturation postulated by Mendoza, the findings also contribute to an expanded understanding of acculturation theory and career advancement. Mendoza's theory of acculturation emphasizes the process of cultural adaptation; however, his concept does not deal with career advancement or work related issues. The findings of this research study provide the basis for a new set of premises. In particular, these propositions allow for an understanding of the relationship between acculturation and career advancement. The propositions offer an explanation of the relationship between acculturation and career advancement, and are as follows: 1) Cultural resistance to the host culture appears to impact the immigrant's level of career advancement. 2) Immigrants who embrace the host culture and either shift towards the host culture or incorporate the two cultures will more likely achieve his/her work-related goals than the immigrant who resists cultural adaptation. 3) The acculturated immigrant who applies the qualities necessary to acculturate to the workplace will be more likely to advance his/her career. 4) The immigrant who considers the positive benefits of both cultural influences will more likely achieve his/her career goals.

Implications

Based on the analysis of this study, the researchers have presented how acculturation and career advancement are interrelated. The acculturated immigrant who applies the qualities necessary to acculturate to the workplace will be more likely to advance his/her career. In other words, the immigrant who has learned to adapt, be flexible, be open-minded, to cooperate with others and deal with diversity in the process of acculturation is more likely to advance his/her career. The findings of this study are linked to each of the primary functions of the HRD professional, which include training and development, organizational development, management and career development to improve individual, group and organizational effectiveness.

The HRD professional has the challenge of developing and implementing a strong diversity initiative program so that Hispanic corporate professionals continue to receive development opportunities that prepare them for advancement into higher level positions. In addressing organizational needs, the HRD professional needs to focus on gender and racial and ethnic prejudices which continue to persist in the workforce. The study also provides information for the HRD professional to create unique acculturation training programs for Hispanic corporate professionals. Acculturation strategy development for Hispanic corporate professionals should include knowledge and skills training sessions on teamwork principles, communication skills, leadership skills, ethical standards and practices, and dealing with diversity in the workplace.

The outcomes of this study substantiate the research findings that suggest a need for research-based training to be delivered in the workplace, (cited in Sanchez & Brock, 1996). Acculturation evaluations coupled with acculturation training sessions need to be considered during new employee orientation sessions. Subsequently, the HRD professional can guide the Hispanic corporate professional in developing a unique career plan and assist the individual into training programs which will help accomplish his or her career goals.

Recommendations for Future Research

1) Subsequent studies should examine causality factors for career advancement for Hispanics.
2) Quantitative studies are needed to measure positive and negative aspects of the career advancement of Hispanics in the corporate arena.
3) Research on diversity and acculturation training programs needs to be conducted to isolate the career advancement strategies which are most effective for Hispanics.
4) Diversity and acculturation training programs should be evaluated to determine the effectiveness in career advancement of Hispanic managers.
5) Both qualitative and quantitative studies on acculturation should be performed on non-Hispanic minority groups.

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The Impact of Action Learning on the Conflict-Handling Styles of Managers in a Malaysian Firm

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Action learning has been proposed as an effective way of developing conflict-management skills. In this quantitative experimental study, the managers from two sections of a Malaysian technological institute were administered a pre-test - post-test of the Rahim Organization Conflict Inventory. One section of 24 managers participated in a three-month action learning program while another section of 12 managers served . The statistical analysis showed that the group who participated in action learning had a significant increase in the desired integrative style of handling conflict.

Key Words: Action Learning, Conflict Management, Malaysia

Purpose of the study

The purpose of this study was to determine if an action learning experience resulted in managers employing more productive conflict resolution styles, specifically the integrative (collaborative) style. The research studied managers at two separate schools of a technical training institute in Malaysia.

Theoretical Framework

Changes and Leadership

The forces of growth, expansion, diversification, globalization, and technological development have made organizations more and more competitive and complex. This increased competitive intensity created the need to develop more effective leadership at almost all levels in a wide variety of organizations (Kotter, 1990). The skills required in providing effective and efficient services that meet the increasing demand of the students and also to manage personal and organizational conflicts effectively are important for both faculties and administrators. Managers must develop leadership skills, particularly conflict handling skills.

Need for developing conflict-management skills in the Higher Educational Institutions/Colleges of Malaysia

Rapid industrialization coupled with the shift towards capital-intensive production technology has changed the objectives and strategies of human resources development in Malaysia in recent years. In the process of teaching, counseling, promoting and providing other services to students, and also in working with the other professional workers, there is evidence of increasing disagreement or interpersonal conflicts which has apparently occurred between the faculty and the students, between the administrative staff and the students, or among the staff themselves (Zin, 1995). The types of conflicts, among the academic staff include disagreement on the teaching and delivery techniques, assessment strategy, curriculum design and other academic related problems. The conflicts among the administrative staff include disagreement or disputes on the promotional and marketing strategies, allocation of resources, and admission procedures, etc.

The type and the gravity of conflicts in colleges can be as large and as complicated as the conflicts that occur in the multi-national corporations (Zin, 1995). Thus, it is imperative for all faculty and administrative staff of higher educational institutions to deal with conflicts productively and effectively, although the managers that work with these organizations do not necessarily possess the qualifications or experiences that could prepare them to deal with conflicts effectively (Wafa and Lim, 1997). Furthermore, there is very little indication that the higher educational institutions have provided training or personal development programs either formally or informally to their faculty members and managers in dealing with conflicts (Zin, 1995). Although most of these managers undertake various staff development programs, it is not always possible for the colleges to release all of them to attend the development programs at the same time and hence some loss of synergy could be expected. Thus, it will be very beneficial for these managers and for the colleges if this study could provide them with a means of learning or on the

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job training that would improve their conflict handling skills and provide other personal development whilst at the same time avoiding the need to release staff for traditional development programs. However, before any development or training can be applied to managers in coping with conflicts, it is important to understand the meaning and the causes of conflicts.

Conflicts

A conflict may be the result of an individual or an interpersonal relationship, an inter-group relationship, or a combination of the three. A disagreement between two individuals for example may be related to their personal differences, their job definitions, their group memberships, or all three. According to Rahim (1983), conflict may originate at a number of intrapersonal and interpersonal levels in the organization. If conflict originates within a person, it is called intrapersonal conflict. If it originates between two or more persons, it is called interpersonal conflict. If interpersonal conflicts originate within a group, or between two or more groups, these are called intragroup and intergroup conflicts, respectively.

Also, considerable diversity among people who are interdependent in complex ways leads to conflicts and the desire to influence situations that occur around them. Hence, the ability to manage changes, to establish direction for organizations or department, to align people inside the organization or outside the organization, and to manage conflict has been identified as the key challenges among the leaders or managers of the 21st century (Kotter, 1990; Marquardt, 1999). Given this environment, it is important that individuals or leaders in organizations learn faster and more efficiently in order to cope with these changes, especially in the area of coping with conflicts. The review of literature indicates that individual managers use different conflict resolution styles when dealing with conflicts (Blake and Mouton, 1964; Thomas and Kilmann, 1974; Rahim, 1983; Sashkin, 1995).

Conflict Handling Styles The idea that individuals have different personal conflict handling styles has existed in the literature for many decades and many theorists have developed instruments to measure conflict handling styles (Kilmann and Thomas, 1977; Rahim, 1983; Sashkin, 1995). In early nineties, Mary Parker Follett (1940) identified domination, compromise, and integration as three ways of dealing with conflict. Blake and Mouton (1964) are credited with identifying five conflict-solving strategies: smoothing, compromising, forcing, withdrawal, and problem-solving. According to Blake and Shepard (1964), the five conflict-handling modes represent a degree of cooperation, or willingness to satisfy another's needs, and assertiveness, or need to satisfy one's own needs. Thomas and Kilmann (1974) later developed a conflict-mode instrument designed to determine managerial conflict-handling behavior and labeled their approaches accommodating (smoothing), compromising, competing (forcing), avoidance (withdrawal), and collaborating (problem solving).

Using a conceptualization similar to that of Blake and Mouton and Thomas, the styles of handling interpersonal conflict were differentiated into two basic dimensions, concern for self and concern for others (Rahim, 1983). In his model, Rahim (1983) proposed a classification of the five conflict-handling styles using the terms; integrating (IN) (or collaborating), obliging (OB) (or accommodating), dominating (DO) (or forcing), avoiding (AV), and compromising (CO). This classification of conflict-handling styles is based on different combinations of high and low levels of concern for self and the other person. The dominating style has been identified with a win-lose orientation and with the use of forcing behavior to win one's position. At the other extreme, the accommodating style represents trying to satisfy the other party's wishes at the expense of one's own. However, according to Rahim, the integrating style is the most preferred conflict handling style as it indicates that the manager has high concern for self and also high concern for others. Rahim's conclusion that integrating style is a better style for conflict resolution is congruent with many other conflict theorists.

Managing Conflicts To manage conflict productively, managers need to be able to communicate. In their work on the intergroup conflict, Watson and Johnson (1972) elaborated on the four kinds of communication required for effective conflict management. Firstly, it is important for each of the conflict participants to have a clear perception of the other's underlying motivations and position. Secondly, accurate communication is essential in order to allow true understanding to occur between individuals. Thirdly, an attitude of trust must be conveyed for productive interaction. Fourthly, a shared assessment of the conflict as a mutual problem is needed to motivate participants to attempt to ameliorate their differences. According to Davis (1987), conflict situations may be divided into four outcomes depending on the perspectives of the people involve. The four outcomes include lose-lose, win-lose, lose-win, and win-win. The win-win is the best outcome of all. In this situation, creative solutions are sought that provide benefits to both parties.

The kind of communication posited by Watson and Johnson (1972) represents the need to engage both parties in managing the conflict. The prescribed attempts to achieve mutual understanding and to acknowledge the concerns of all parties also reflect efforts to integrate the needs of both sides into the process of handling the conflict. Taking account of the concerns of both parties and viewing the conflict management process as a "win-win" situation enables individuals to establish an integrating (or collaborating) style (Borisoff and Victor, 1998). Many conflict theorists maintain that integrating (or collaborating) may be highly effective in managing differences (Thomas and Kilmann, 1974; Rahim, 1983; Umiker, 1997). The reason given is that the integrating style requires the effort, effective communication, and open-minded attitude needed to ensure that the concerns of both sides are fully articulated and addressed.

Action Learning, Problem solving and managing conflicts Since its development by Revans in the 1940's, action learning has contributed tremendously within the field of human resources development. It has created new paradigms in the areas of training and development, especially in the area of the learning and training of managers. In his theory of action learning, Revans advocated that managers/individuals learned through problem solving and taking action. Action refers to solving real problems in the actual working environment. Revans (1991) also stressed that 'there is no learning without action and no sober and deliberate action without learning'.

Many agree that action learning is an effective method for individual learning (Peters and Smith, 1996; Raelin, 1997) and assist in the organizational development (Margerison, 1988; Levy and Brady, 1996) as well as providing an effective tool for developing leadership skills (Morris, 1991; Mumford, 1995; Marquardt, 1997). Action learning not only makes explicit to the participant managers their own inner processes of decisions, it also makes them equally attentive to the means by which those processes effect changes in the world around them. Thus, through the action learning process of continuously questioning insight, managers will develop leadership's diagnostics skills and find ways to solve conflicts competently.

A brief analysis, which indicates the applicability of action learning program in improving the conflict handling skills of managers, is summarized in table 1 below.

Table 1
Analysis on the Conflict Resolution Process and Action Learning

Category	Conflict Resolution Process	Action Learning Program (AL)
1.	Communication and discussion between participants	Communication takes place in the AL set.
2.	Two or more persons involved	Each set consists of four to eight people
3.	Participants must have clear perception of each other's position	Continuous questioning process is used in the set to clear any doubt
4.	Analysis of misunderstanding or conflicts) (Problem solving)	Set members work together to diagnose and solve problems
5.	Discussion on the differences and find way to solve them	Constant review and providing feedback to each other is one of the key functions of action learning
6.	Individual's understanding and learning of the conflicts	Individual learning is an important result from action learning
7.	Individual works on the outcome of resolution	All members of set take action after each meeting
8.	Mutual respect and trust among the participants	Set members are empowered to help each other to learn from the process

To elaborate upon the perceived effectiveness of using an action learning program in improving the conflict resolution skills of managers, from the table above, it is clear that both the process of conflict resolution and action learning are identical in many aspects. Firstly both the conflict resolution process and action learning program are established with a similar purpose. That is, both groups of people are coming together to solve their problems collectively. Secondly, the active participation in dealing with the problem are similar, both the conflict resolution program and action learning program demand all participants meet in a group and have verbal communication with each other about the problem/conflict. Thirdly, the expected outcome and the result; the expected outcome of the meeting in both programs will be that the problem/conflict is solved, and that the participants in both groups will learn from the process of questioning, clarification, and reviewing with each other.

Research Questions

Both the null and alternative hypotheses have been identified.

Null hypotheses: *The action learning program does not have any influence on the conflict handling styles of the managers in the College A.*

Alternative Hypotheses: *The action learning program has an influence (either positively or negatively) on the conflict handling styles of the managers in the College A.*

In the null hypotheses, it was predicted that the action learning program (or the treatment) will not have any influence on the conflict handling styles of the managers of the College A. The indication was that the quantitative data of the pre-test and post-test of the managers in College A will be the same or the differences between the pre-test and post-test would not be significant. In the alternative hypotheses, it was predicted that the differences in quantitative data between the pre-test and post-test would not be significant. The differences could be positive or negative. This will indicate whether the action learning program was effective in influencing the conflict handling styles of the managers of College A or if it had a negative impact on them.

Research Methodology

The conflict handling styles of two groups of managers was collected in the pre-test and post-test. One group acted as a control group and another group underwent an action learning program (treatment) for a period of three months. The conflict handling styles of the managers of group A (group that will undergo the treatment) and the managers of group B (control group) were measured before and after the three-month program. Matching tests were carried out on both groups of data.

The research design was a Nonequivalent (Pre-test and Post-test) Control Group Design (Creswell, 1994; Campbell and Stanley, 1966) on two groups of managers in a Malaysian organization. The design is illustrated with the notation as shown in figure below.

Figure 1 - Model for Quantitative Research Design

Group A O ----- X ----- O
Group B O -------------- O

Population

The population in this study were the academic staff and administrative staff of the two technological colleges in Malaysia. These colleges are private higher educational institutions established in Malaysia to offered tertiary education in technological education; for instance, electrical/electronic engineering, mechanical engineering, building construction and computer science. The courses offered in these colleges are at diploma and degree level and the students are mainly graduates of Malaysian high schools. Each college has approximately a total number of 1500 students and a total number of 100 staff. The staff in these two colleges consists of experienced architects, engineers, construction technologists, computer scientists and business managers. Most of the staff possess academic qualifications of graduate and post-graduate level.

Sample

The selected population was stratified so those specific characteristics are represented in the sample. The sample consisted of managers of the college who have more than three subordinates that report directly to him or her. The managers comprise of the directors, the senior academic staff, the lecturers, and all the heads of the administrative office of the colleges. There were two groups of managers: 24 who were working in the college A situated in Kuala Lumpur and 12 managers at college B that is situated in Ipoh, Perak, 200 miles to the north of Kuala Lumpur.

Data Collection

In this study, both the quantitative data and qualitative data were collected. The data includes the demographic background of the managers, their conflict resolution styles, and responses to the interviews.

Instrument for Quantitative data

The instrument used was the Rahim Organization Conflict Inventory II (ROCI-II) (1983). The instrument consists of both the demographic information and the conflict handling styles of the managers. The ROCI-II is designed to measure five independent dimensions that represent styles of handling interpersonal conflict: Integrating (IN), Obliging (OB), Dominating (DO), Avoiding (AV), and Compromising (CO). The ROCI II forms A, B, and C measure how a manager handles conflict with his or her boss, subordinates, and peers, respectively. The five styles of handling conflict are measured by seven, six, five, six, and four statements respectively, selected on the basis of repeated factor and item analyses. A subject responds to each statement on a five-point Likert scale. The higher the score the greater use the respondent makes of that style. The instrument includes a form that records the demographic information about the subject. The ROCI-II can be administered in just eight minutes.

Rahim's instrument was chosen to collect the quantitative data because it also has, according to Khoo (1994) good validity, reliability, and suitable for cross-cultural environment.. Rahim reported that his instrument possessed test-retest reliability coefficients of .83 for Integrating, .86 for Obliging, .76 for Dominating, .79 for Avoiding and .60 for Compromising, which indicates high reliability. He also reported the coefficient alphas of (.77, .72, .72, .75 and .72) respectively. This indicates an acceptable internal consistency. Rahim's model has been used to measure the individual conflict handling styles in Malaysia (Wafa and Lim, 1997; Tamam, Hassan and Yaid, 1997). These studies however, were not used in relation to the impact of action learning on conflict handling styles.

B. Intervention

There are many different recommendations and proposals given by various authors for an effective action learning program. In this study, the intervention process was designed based on the six fundamental elements advocated by Marquardt (1997, 1999). The six fundamental elements include: (1) an action learning group or set, (2) a project, problem, or task, (3) a questioning and reflection process, (4) a commitment to action, (5) a commitment to learning, and (6) a set facilitator or learning coach.

The action learning program was introduced and conducted on Group A for three months (June - September, 1999) while the control group was not be given any treatment during this period of time. To prepare for the intervention, all the managers were given basic training and opportunity for guided practice on the theory and application of action learning. All the managers were also be trained on the basic facilitation skills, especially on process of questioning and reflection.

In Group A, managers were divided into four groups or sets, each of six persons. Organizational problems were be introduced to each set. All the problems or projects were sponsored by College A. Each set was scheduled to meet for two hours, once a week over a period of three months. The set members worked on these problems by using the action learning method. Each manager rotated to facilitate the meetings and recorded the discussion that had taken place. Each member was responsible to carry out the work and to record his/her learning throughout the process.

Data analysis

The quantitative data was analyzed according to the theory of Creswell (1994), using the descriptive statistics calculated for observations and measures at the pretest or posttest stages of experimental designs. These statistics are means, standard deviations, and ranges. The uni-variate analysis of variance (ANOVA) or *t*-test were also used to determine the statistical significance of mean score differences among treatment groups. In mathematical form, three level of analysis were applied.

1. The average score for all the five conflict handling styles on pretest were computed to identify the initial preferred styles of the managers of groups A and B.
2. The average score for all the five conflict handling styles on posttest were also computed to identify the subsequent preferred styles of the managers in two groups.
3. The result for each group were compared to identify the actual impact that the action learning has on the conflict handling styles of the managers.

Results and Findings

The most widely used acceptable test of significance on experimental design is to compute for each group pretest-posttest gain scores and to compute a t between experimental and control groups on these gain scores (Campbell and Stanley, 1963). The results listed in the table and Table 3 reports the test of significance on the Group A and Group B respectively.

Table 2

Test of significance on Gain Scores on Pretest-Posttest the Group A (treated group) t-tests for Paired Samples (conflict handling with the boss – gain scores)

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
Posttest (Boss)				4.3960	.387	.100
	15	.786	.001			
Pretest (Boss)				3.7980	.593	.153

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail Sig
.5980	.375	.097	6.18	14	.000
99% CI (.310, .886)					

t-tests for Paired Samples –gain scores (with the Subordinates)

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
Posttest (Boss)				4.6377	.280	.078
	13	.415	.159			
Pretest (Boss)				4.2738	.278	.077

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail Sig
.3638	.302	.084	4.35	12	.001
99% CI (.108, .619)					

t-tests for Paired Samples - gain scores (with the Peers)

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
Posttest (Peers)				4.6377	.280	.078
	13	.415	.159			
Pretest (Peers)				4.2738	.278	.077

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail Sig
.3638	.302	.084	4.35	12	.001
99% CI (.108, .619)					

The total number of pairs that have gain score were 19 pairs on dealing with the boss, 18 pairs in the case of subordinates, and 19 pairs on peers. The results indicated a significant change in the mean of the sample. The null hypotheses for all three conditions were rejected at $p<0.0001$ in the case of dealing with the boss, $p<0.001$ in the case with the subordinates, and $p<0.001$ in the case with the peers. All the p-values were much less than p-value set for testing the hypothesis ($p<0.01$) with the 99% confidence interval. Based on the testing on the gain scores, it can concluded that the managers in Group A have made significant changes in using the integrating style to handle conflicts in the workplace after the three month period.

The results in Table 4 indicate that there was no significant change that had taken place between the result of the pretest and posttest in all three conditions for the managers of Group B. The p-value in the case of dealing with the boss is $p<0.031$, in the case of dealing with the subordinates, the p-value is $p<0.090$, and the third case, the p-value is $p<0.123$. All the p-values are more than the p-value set to test the hypothesis ($p<0.01$). Statistically, all the three results failed to reject the null hypotheses ($Ho : u1 - u2 = 0$). Thus, it indicated that the usage of integrating style among the managers of Group B did not change significantly over the three-month period.

Table 3

Test of significance on Gain Scores on Pretest-Posttest the Group B (control group) t-tests for Paired Samples –gain scores (with the boss)

	Number of		2-tail			
Variable	pairs	Corr	Sig	Mean	SD	SE of Mean
Posttest (Boss)				4.3200	.494	.221
	5	.800	.104			
Pretest (Boss)				3.8800	.456	.204
Paired Differences						
Mean	SD	SE of Mean	t-value	df	2-tail Sig	
.4400	.303	.135	3.25	4	.031	
99% CI (-.184, 1.064)						
t-tests for Paired Samples – gain scores (with the subordinates)						
	Number of		2-tail			
Variable	pairs	Corr	Sig	Mean	SD	SE of Mean
Posttest (Subordinates)				4.3700	.238	.106
	5	.521	.368			
Pretest (Subordinates)				4.1500	.212	.095
Paired Differences						
Mean	SD	SE of Mean	t-value	df	2-tail Sig	
.2200	.221	.099	2.22	4	.090	
99% CI (-.236, .676)						
t-tests for Paired Samples – gain scores (with the Peers)						
	Number of		2-tail			
Variable	pairs	Corr	Sig	Mean	SD	SE of Mean
Posttest (Peers)				4.2600	.418	.171
	6	.949	.004			
Pretest (Peers)				3.8500	.923	.377
Paired Differences						
Mean	SD	SE of Mean	t-value	df	2-tail Sig	
.4100	.543	.221	1.85	5	.123	
99% CI (-.483, 1.303)						

Based on the test results on the gain scores for pretest and posttest, it reveals that managers in Group A have experienced a significant improvement (with the boss, $p<0.0001$, with the subordinates $p<0.001$, and with the peers $p<0.001$) in using the integrating style. The statistical test on gain scores for Group B was not significant and it failed to reject the null hypothesis. This meant that managers in Group B (control group) did not change in using integrating style when solving the interpersonal conflicts with any of his colleagues.

In conclusion, the results show that the conflict handling styles of managers in Group A have improved after the three month period and the highest improvement is in the integrating styles and the most significant change is in the condition when the managers was resolving conflicts with the boss.

Significance of Research

The findings of this research described in this proposal are significant to several areas of study, including:

- **The first quantitative study on action learning**: From the review of literature, research on action learning programs has been conducted solely using qualitative methods. There has been no quantitative study or statistical data reported so far. Thus, this study will be the first statistical study on the impact of action learning on the conflict resolution skills of managers.

- **The first action learning study to measure conflict management styles**: Study on the impact of action learning program has been focused on different areas, such as learning styles (Mumford, 1997) and organizational and business development (Seekings and Wilson, 1997). However, this study will be the first in conducting the study on the impact of action learning on the manager's conflict handling styles.
- **Study of leaders in educational fields** : Studies on the conflict handling skills and other personal characteristics have been conducted on managers of types of organizations that are non-educational. This study is the first of its kind on the effect that conducting action learning has on the conflict handling styles on the managers of higher education colleges. With the rapid development of educational services, especially higher education in the Asian region, this study is timely and significant to the development of effective, quality leaders and managers in educational institutions.

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What is it Like to be an HRD Practitioner in Taiwan?

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This interpretive study described the lived experiences of Human Resource Development (HRD) practitioners in Taiwan. Using hermeneutic phenomenology as the methodology, five participants were interviewed about their daily work experiences as HRD practitioners. Three major themes were introduced about HRD in the Taiwanese work culture: (a) HRD is one aspect of HRM, (b) HRD is equated with training in Taiwan, and (c) HRD success relies on the visions and support of top management.

Keywords: HRD, Practitioners, HRM, Taiwan

Human Resource Development (HRD) is a relative new area of professional practice and academic study (Jacobs, 1990). In order to establish HRD as a solid, credible discipline, HRD practitioners attempt to bridge the gap between theory and practice. Nadler (1983) defined HRD as an "organized learning experiences, in a given period of time, to bring about the possibility of performance change or general growth for the individual within an organization" (p. 9). From an Adult Education perspective, Watkins (1989) suggested that HRD fosters a long-term, work-related learning capacity at the individual, group, and organizational levels. Although HRD has a variety of definitions, it is generally accepted that at least three components are included: organization development (OD), training and development (TD), and career development (CD). McLagan (1990), in fact, asserts that HRD integrates TD, OD, and CD to improve individual, group, and organizational effectiveness.

In Taiwan, Human Resource Management (HRM) is considered to be far more significant than HRD. Within the country's higher education community, however, the relatively new concept of HRD is becoming an increasingly important subject. Naturally, some confusion exists over related concepts in the fields of HRM, HRD, and industrial relations (IR). To lessen that confusion, five questions about HRD professionals in Taiwan were the focus of this study.

1. What are the various functions and definitions of HRD in business settings?
2. What are the various roles of HRD practitioners in Taiwan?
3. As internal consultants in business settings, do HRD practitioners complete essentially the same tasks as personnel managers using the employment designation "HRD" rather than "personnel"?
4. As external consultants, do HRD practitioners only help companies recruit employees or do they actually provide some human resources functions as well?
5. What is it like to be a HRD practitioner in Taiwan?

Theoretical Framework

As a discipline, human resource development is relatively new and lacks a clear theoretical foundation. However, according to Swanson (1978), theories from psychology, economics, and systems form a visual image of the three-legged stool that is HRD. Psychology, "the science of behavior and mental processes of humans and other animals" (Passmore, 1995), has its own philosophical roots. Although the greatest significant impact of psychology on HRD practice resides in the area of applied psychology, the concepts of behavioral, cognitive, and humanistic psychology specifically influence HRD as a learning process.

The major consideration of economics as an influence on HRD is in the statement that the goal of economic activity is to maximize "utility," a construct that embraces consumption, production, and related behavior. From an economic point of view, HRD is closely related to the theory of human capital theory; however, the issue of how HRD practitioners apply economic theory to practice in Taiwan's changing society is also very important.

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McLagan (1989) describes a system as a collection of interdependent, organized parts that work together in one environment to achieve the purpose of the whole. The goal of systems analysis is to capture the interrelated and complex nature of the phenomenon under study (Passmore, 1995). As a complex emerging field, HRD should be studied from a systems perspective; therefore, the manner in which both Taiwanese society and its workforce regard "HRD" as a discipline should be considered.

Research Question

"What is it like to be a HRD practitioner in Taiwan?" is the central research question upon which this study was based. Questions that are associated with the central research question include: "What is the function of HRD in the changing Taiwanese environment?" and "What is the role of HRD practitioner in Taiwan?"

Methodology

This study used qualitative research methods to interview five Taiwanese HRD practitioners. Further, it used hermeneutic phenomenology as the research methodology through which to understand the inherent phenomena (phenomenology) and to interpret the lived experiences of Taiwanese HRD practitioners (hermeneutics). Both concepts are central to interpretive inquiry (Hultgren, 1989).

The purpose of this study was to establish shared understanding and mutual agreement among Taiwanese HRD practitioners about their lived experiences in the HRD field. In-depth interview were used to gather experiential narrative material that served to develop a much deeper understanding of Taiwanese HRD practitioners in both individual and group situations. The interviews were transcribed verbatim, and themes that emerged from that text were analyzed.

Study Participants

The interview subjects were five Taiwanese HRD practitioners who ranged in age from 27 to 50+ years. They all considered themselves to be "HR" practitioners rather than "HRD" practitioners. By title, the five participants were a training supervisor, an HR manager, an independent HR consultant, an HR supervisor (Human Resource Division), and an HRD professor (Industrial Relations Department).

Text Analysis

Themes began to emerge from this study following verbatim transcription of the interview tape recordings and text analysis. The verbatim transcriptions were closely reviewed through a "back and forth" review of the text and coding technique. An extensive literature review and examination of other documents provided a triangulation of research methods in the text analysis.

Findings

My analysis of the text produced three major themes: (a) HRD is one aspect of HRM, (b) HRD is equated with training in Taiwan, and (c) HRD success relies on the visions and support of top management.

HRD is one Aspect of HRM

Compared with HRM, HRD is a relatively new term in Taiwan. However, in keeping with HR as a new trend worldwide, most Taiwanese companies changed the name "Personnel Department" to "Human Resource Department." Basically, these companies do not extend the function of human resources; their activities still focus on HR management functions such as compensation, benefits, and labor law issues. As one of participant said:

> In Taiwanese organizations, the so-called HRD practitioners still deal with low-end matters. Instructional design or teacher planning is just a small portion of their daily work. We spend a lot of time on administrative work. HRD in Taiwan just part of the HRM function. I don't think they pay much attention to HRD here.

HRD is equated with training in Taiwan

According to Korth (1997), instructional design, teacher planning, and performance technology are each areas of HRD. However, HRD practitioners in Taiwan are referred to as "training specialists" since a large part of their responsibility is to deliver training.

Does HRD in Taiwan include performance technology or teaching planning? The answer is "no," therefore, Taiwanese organizations do not see the breadth of activities associated with "HRD" or even "training and development"; they just saw "training." If companies are large enough, they may have a training center to deal with all aspects of training, including some elements of teacher planning and performance technology. If companies are small, they generally buy ready-made materials and ask their "HR Specialist" to delivered the materials. One participant noted:

> The thing that I deal with most is to call the labor bureau and ask what benefits our employees can get. There's a lot of law that we need to follow, a lot of paper that we need to field. I've been thinking about planning some training activities for our employees, but it seems that it is not our company's first priority. If we really need a training program, my boss just sends people out or buys a training program and asks us to deliver it.
>
> The so-called OD, I don't think can survive in Taiwanese organizations. Training may be more visible. Organizational change is not what we need to consider; that kind of issue belongs to the top management.

HRD success relies on the visions and support of top management

Just like most organizational activities, without the top managers' commitment, lots of activities barely succeed. Therefore, if the leader of the company has a clear vision and supports training and other HRD-related activities, HRD practitioners are able do more meaningful work. Some leaders who lack a vision of HRD as a profession seek only their company's immediate financial results instead of long-term business results.

With this management philosophy in mind, HRD practitioners in Taiwan do have some strategies to re-educated top managers. One participant explained:

> HRD practitioners in Taiwan better take the HRM position and work as their strategic plan. Because we don't have enough HRM people, we need to wait and cultivate our own HRD people who share the same vision and shift the paradigm.
>
> I really appreciate my boss, who supports my training program. Even when he asks me about the results [of training on performance], and I cannot give him an answer, he still lets me do it. And it pushes me to think about performance as a result of the training.

Conclusion

According to the findings detailed in the three themes discussed, it appears that although Taiwanese HRD activities are currently considered part of HRM activities, there will be more opportunities for development in HRD-related areas. Based on my observations and the responses of my participants, in Taiwan, when the various foreign-owned and joint venture companies who focus on various HRD activities and become benchmark organizations, more opportunities will be created for HRD professionals to change Taiwanese organizations in the near future.

Contribution of Research to HRD

This study contributed to the body of knowledge in HRD by providing a deeper understanding of Taiwanese HRD practices and practitioners. In addition, through a deeper understanding of Taiwanese HRD practitioners, this study also provided a connection between theory and practice. Hopefully, this study provided useful information to other Taiwanese HRD practitioners, researchers, and educators.

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Role of Public Sector Agencies in National Human Resource Development: A Study of the Expectations of Singapore-Based Companies

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Countries and organizations are placing increasing emphasis on human resource development at the strategic level as they realise its significance to sustain competitive advantage. Singapore is developing itself from an industrial-based to a knowledge-based economy to fully capitalise on the only resource it has—the people. In the countries where public sector plays a significant role in strategic HRD, such as Singapore, the need for involvement of companies from all sectors was found to be crucial for the success of national HRD programmes.

Keywords: National HRD, Manpower Development, Public Sector

With constant changes in technology, market needs, and demographic composition of workforce, today's global business environment has become extremely competitive. As we move into the information age, knowledge and skills have become the new strategic weapon of competitive advantage in this dynamic world. These will be the key tools for achieving and sustaining competitive advantage in the dynamic global business environment of the next millennium. Peter Drucker (1993) expounds, "this worker is now at the centre of history because he now owns the key means of production: the knowledge in the head." Thurow (1997) mentions, "Knowledge has become the only source of long run sustainable competitive advantage, but knowledge can only be employed through the skills of individuals." Strategic human resource development (HRD) planning can address the issues of constant changes in knowledge and skills requirements of today's dynamic organisations.

Countries and organizations all over the world are placing an increasing emphasis on human resource development at the strategic level as they realise its significance to sustain competitive advantage. Kempton (1995) mentioned that human resource (manpower) planning and development strategies operate at both the national and organizational levels, and this is due to many reasons. Some of which are: (a) industrial structure are becoming more complex and hence, the economy will require more specialized skills, (b) rapid changes in technology and the increasing dependency on computer and information system are generating the increasing need for computer literate/proficient employees, (c) it is becoming more difficult to dismiss workers as there are more and more legislations enacted for the protection of employees, and (d) demographic changes are taking place due to employee mobility and wider access to employment information.

Many nations have recognised that effective human resource planning and development is necessary to raise the standard of living for their people. Countries are pursuing industrial development to raise standard of living, but industrial development will not be possible without an adequate pool of right people with requisite skills to do the right jobs. As such, nations are increasingly incorporating national HRD planning as an integral part of their strategic economic plan to achieve economic growth.

Bennison and Casson (1984), has outlined the sequence of manpower planning and development as: (a) Analysing current manpower resource, (b) Reviewing labour utilisation, (c) Forecasting the demand for labour, (d) Forecasting supply, and (e) Developing a manpower plan. In the whole planning process, the significance of human resource development efforts has been emphasised for continuous upgrading of skills and competencies of employees in order to compete in a changing business environment.

Tan and Torrington (1998) identified three approaches to strategic manpower planning and development: (a) social demand approach, (b) manpower requirement approach, and (c) rate of return approach. These approaches will help organizations to make strategic decisions through planned effort by management for acquiring required manpower and continuously improving employee competency levels and organizational performance. According to them, the objective of manpower development planning is to "provide a pool of skilled labour to support national development efforts in order to ensure the best use of human resources in line with national needs".

Co-ordination is very important to ensure that human capital in the nation is utilised in the optimal manner. In the formulation of national manpower plan, the relevant authorities have to take into the account the manpower requirements in different business sectors as well as in different geographical regions. At the same time, the authorities have to ensure that there are adequate investments in pre-employment education and the development of the existing workforce.

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Singapore placed a premium on human resource development strategies since its inception, as it does not have the comparative advantage to compete on other critical resources (physical or natural). Moreover, being a small island nation of three million people, it does not have the ability to compete on cost and availability of labour like its neighbours. Thus Singapore's only sustainable comparative advantage lies in continuously developing the human resources (highly skilled and motivated workers to produce high value-added products and services). The government is fully aware of this and is developing Singapore from an industrial-based to a knowledge-based economy to fully capitalise on the only resource it has—the people.

Singapore has identified the strategic importance of human resource development at the early stage of its development journey, which is reflected in its Strategic Economic Plan (SEP). Among the eight strategic thrusts of the SEP, "Enhancing Human Resources" was identified as the first strategic thrust. The recent unveiling of Manpower21, a comprehensive plan for the development of its workforce capabilities has reinforced government's emphasis on HRD (Manpower News, September, 1999). The vision of Manpower21 is for Singapore to evolve into a "Talent Capital", where the knowledge, skills and attitude of its people are the keys of competitive advantage. To achieve this vision, six strategies and 41 recommendations have been identified. The strategies are: (a) integrated manpower planning, (b) lifelong learning for lifelong employability, (c) augmenting the talent pool, (d) transforming the work environment, (e) developing a vibrant manpower industry, and (f) Re-defining partnerships among the government, employers and trade unions. The national manpower planning in Singapore is done by an inter-ministerial committee consisting of members representing relevant bodies including the Presidents of the Universities (Osman-Gani & Tan, 1998). The policies are implemented through several strategies, interventions and initiatives taken by the key public sector agencies. Unlike many developed countries, government and the public sector agencies play significant roles in various aspects of Singapore's economic development specifically in human resource development.

Although much has been done in the area of national human resource development, no empirical findings are available that had studied the role of public sector agencies in human resource development. In addition, no study has been done in the past to identify the Singapore-based companies' expectations from the relevant government agencies with regards to the national human resource/manpower development strategies. Therefore a significant research gap exists in this area.

In order to develop a broader insight into human resource development strategies of Singapore, and to address the research gap mentioned above, the following research questions are formulated for this study:

Research Questions:

1. What are the roles of Singapore's public sector agencies in the design and implementation of national human resource development strategies?
2. What are the expectations of Singapore-based companies from key public sector agencies for the supply of required skills and competencies through national HRD strategies?

Methodology:

The research methodology for the study consisted of sample interviews, and a survey of Singapore-based companies. Interviews were conducted with the senior managers of companies representing various business sectors, and their major expectations from the key government agencies were identified. Subsequently, a survey was conducted using a structured questionnaire, which was developed based on the findings of sample interviews and the literature review. The questionnaire was tested for reliability and validity before the final administration. A panel of experts comprising of university faculty, senior officials of public sectors, and senior business executives, was consulted to verify the content, sequence, structuring and relevance of the questionnaire items. In addition, it was administered to a sample of forty managers from various business sectors of Singapore, in a pilot test. The inputs from the pilot test were incorporated in the finalization of the questionnaire, which was administered through mail and facsimile system.

A sample of 500 companies was used for this study, and the respondents were selected randomly from the "Singapore 1000" directory. This sampling frame consists a listing of top 1000 companies (based on annual sales turnover) operating in Singapore. The stratified random sampling procedure was used by identifying the five major business sectors of Singapore: manufacturing, construction, commerce, transportation/communication, and the financial/business services sector. The classifications of the major industrial sectors were taken from the Singapore

Standard Industrial Classification (1990). The study covered three major public sector agencies (hereinafter named as agencies: A, B, & C), which are primarily responsible for manpower planning and development of Singapore.

Results:

Profiles of Respondents:

A total of 109 completed questionnaires were obtained, providing an overall response rate of 21.8%. Based on previous experience in similar kind of studies, this is considered to be an acceptable number of responses for making necessary generalisations. The respondents were generally Managers/Directors of Human Resource or other relevant departments. Some of the respondents were CEOs and other senior managers of the responding companies. The respondents consisted of 45.8% local companies, 42.6% MNCs and 11.6% of others that mainly comprised of joint ventures and subsidiaries of foreign-owned companies. The majority of the respondents were from the manufacturing sector, which yielded a high response rate of 44.7%. The commerce sector was ranked second where it constituted a response rate of 19.1%. The transportation/communication sector, the construction sector and the financial/business services sector contributed 18.1%, 14.9% and 3.2% respectively to the total response rate. About 83% of the respondents came from organisations that have operated more than 10 years in Singapore, while only three organisations had less than five years of business operations in Singapore.

Roles of public sector agencies in national HRD strategies:

The roles of each of the three key government agencies were discussed in terms of the design and implementation of various HRD programs at the national level. The implications of these programs on national manpower development are discussed through the response to the first research question.

Research question 1: What are the roles of Singapore's public sector agencies in the design and implementation of national human resource development strategies?

In order to respond to the above research question, secondary information was collected from the relevant publications, and Internet websites of the three key public sector agencies. In addition, primary data were gathered through structured interviews with the senior officials of the three agencies. Following findings are presented for each of the three agencies (A, B, and C).

Public Sector Agency A:

In 1961 the agency was set up to spearhead Singapore's economic development, and its most important goal was to develop the manufacturing industry in order to create full employment in Singapore. Today the agency's programmes are responsible for contributing one third of the national GDP in manufacturing and services. The agency has also been tasked to play a role in creating an external economy through the enhancing of activities in the region. The agency also works closely with the other government agencies to ensure that relevant infrastructure and key manpower capabilities are available for industry and business needs. Economic Resource Development (ERD) is a major business function within Agency-A, which manages manpower, housing, land, and utilities. The programme has three thrusts: Resource Management, Capability Development and Manpower Augmentation.

(a) Resource Management: Resource Management thrust ensures that Singapore's manpower, utilities and land policies support the dynamic and changing need of the economy. It collaborates with other agencies to ensure that the limited resources are efficiently and effectively allocated and utilised. As Singapore progresses towards a knowledge-based economy, Resource Management poses some challenges as noted by the Deputy Prime Minister, "As we progress towards a knowledge-based economy, the nature of manufacturing and manufacturing services will change. Companies will need even more knowledge and skilled workers..... This is why the Government is allowing more foreign talent into Singapore to augment our local talent pool. At the same time, we must correspondingly tighten up on the wide-spread indiscriminate use of unskilled foreign labour...This way we can encourage companies to use more skilled workers without burdening them with higher costs." [ST, 14 April 1998]. To develop Singapore as a vibrant and robust global hub of knowledge-driven industries, Manpower Resource Management is one of the strategic thrusts pursued to achieve this.

(b) Capability Development: The agency tries to enhance the quality of Singapore's workforce in order to ensure sustainable economic growth. One of the means through which this is achieved, is through Capability Development thrust whereby key capabilities critical to industrial development are identified ahead of time. Under the overall economic development mission, the agency plays a strategic and highly developmental role in manpower and capability development. The liaison between agency-A and other government agencies has also resulted in the development of Specialist Manpower Programmes (SMPs) to meet manpower and capability needs of particular industries. In addition, the agency works closely with institutions of higher learning to develop more manpower training programmes so as to increase the supply of technical manpower for sectors like manufacturing and international services.

(c) Manpower Augmentation: Under the Manpower Augmentation thrust, entry of professionals and technical personnel into Singapore are facilitated. In order to meet the needs of its key programmes, the International Manpower Programme (IMP) was established to assist companies to obtain the necessary foreign manpower to support business activities using a total approach. This total approach comprises of recruitment missions, the review and formulation of policies jointly with other relevant agencies to ensure sufficient inflow of suitable foreign manpower as well as the provision of immigration facilitation for the personnel required by companies.

For the future, the Manpower & Capability Development programmes will continue to support the key thrusts of the agency and enhance Singapore's competitiveness. Firstly, Singapore's competitiveness is enhanced in high value added sectors such as the semiconductor and communications industries by identifying key capabilities and formulating initiatives to strengthen its competitive advantage. Moreover, the industry's core capability in line with new products and manufacturing trends will be enhanced. Manpower studies will also be conducted to identify gaps in capability competencies and shortfall in manpower needed for manufacturing and selected service sectors. Secondly, Singapore's local talent pool will be augmented with foreign talent through various schemes and programmes.

Public Sector Agency-B

The agency was restructured with the integration of two major agencies-the National Productivity Board (NPB) and the Singapore Institute of Standards and Industrial Research (SISIR). Its mission is to enhance the economic competitiveness of Singapore and to provide the people with a better quality of life. Besides taking over the functions of NPB and SISIR, it was put in charge of the development of small and medium enterprises (SMEs) which were the responsibilities of the agency-A before the transfer of tasks. Agency-B's duties mainly revolve around manpower development, economic restructuring and technical progress.

Since its establishment in April 1996, it played an important role in developing the manpower of Singapore. It played a significant role during the recent Asian economic turmoil when many people were retrenched and the majority of them did not have the necessary skills to fulfil new jobs requirements. The agency has been quick to respond to this change by reinforcing on its current programmes and embarking on new ones. It has even targeted to attract 50% of the workforce to undergo skills upgrading by the year 2002.

This agency has developed two strategies aimed at developing the manpower of Singapore. These two strategies are in turn supported by six activities. Each activity will then be conducted by the implementation of at least one national manpower development programme [Refer to Figure 1].

Figure 1: Manpower Development strategies, activities and programmes of Agency-B

STRATEGY	ACTIVITY	PROGRAMME
A. Upgrade skills to meet Industry needs	A1 Plan for skills upgrading	1. Capability Development
	A2 Provide critical enabling skills for lifelong learning	2. Critical Enabling Skills
	A3 Create recognised skills ladder	3. National Skills Recognition System
	A4 Improve employer-provided training	4. People Developer 5. On-the-job Training 21
B. Improve utilisation of Human resources	B1 Improve labour force participation	6. Back to Work
	B2 Improve labour productivity	7. Job Redesign 21

[Source: Manpower Development Strategies & Programmes, 1998-2002]

Besides the above Manpower Development programme, the agency has initiated a People Developer Standard recently. It gives recognition to organisations that invest in their people, the standard offers organisations a systematic process for reviewing their human resources development practices and developing staff to achieve better business results [Productivity Digest, October 1998]. The People Developer Standard's three components were developed with references to the American Model of Human Resource Excellence, and the British model--Investors in People. It was further "aligned to the Singapore Quality Award (SQA) criteria for human resource development and management." The components were then field-tested with "organisations which are recognised for their excellent HRD practices" [Press release, 5 December 1997]. These three components can be summarised through the following Figure:

Figure 2: The People Developer Process

COMPONENTS	DIMENSIONS	EVIDENCES	ACTIONS
Commitment to People Developer	Involvement	Training Needs Analysis	Conduct of training needs analysis to achieve Business Plan
		Total Training Plan	Development of Total Training Plan to provide all staff with the requisite skills
		Career Development Plan	Integration of Career Development Plan with Total Training Plan
	Allocation of Resources	Budget	Allocation of budget to implement plan
		Staff	Allocation of staff to implement plan
Implementation to the plans developed	Action	Communication	Communication of the plans made to all staff
		Induction	Induction of all staff into their jobs
		Utilisation of Training Places	Monitoring to ensure utilisation of training places
Follow-up on development activities	Recognition	Acknowledgement of Participation	Acknowledgement of participation of staff in training
		Post-Course Review	Review courses with staff to confirm and follow-up on the learning acquired
	Evaluation	System Review	Review to assess impact on business performance
	Improvement	Utilisation of Feedback	Use feedback to improve existing programmes and plan future ones

[Source: The People Developer, Singapore and Press Release, 5 December 1997]

In order to keep abreast of the changing needs of the workforce of Singapore, the agency has attempted to improve its current Manpower Development programmes. In addition, it has seeded various alternative avenues (e.g. external consultants) to develop innovative Manpower Development programmes. Recognising the differing needs of organisations it has developed courses/programmes specially tailored for them.

Public Sector Agency-C:

This agency plays a proactive role in promoting, expanding and facilitating trade by keeping channels open and reinforcing its commercial presence overseas. The agency also helps in improving the export capabilities of local companies by actively tracking trends and identifying new markets segments and opportunities." By working closely with other government agencies and the private sector, it works towards achieving their vision of "Towards

Singapore as a Global City of International Trade". Despite the recent Asian economic crisis, the agency continued with their promotional efforts instead of cutting down on them so as to realise its mission of "To contribute to Singapore's Prosperity through Trade Expansion".

Manpower Development is viewed to be crucial for the success of Trade Facilitation, which provides a wide range of support for global trade to be conducted. The support includes both hard and soft infrastructure ranging from trade operations, trade logistics to trade support services. Export Institute of Singapore (EIS) was established in March 1990, whose mission is to train export marketers and international traders to facilitate and promote Singapore's regionalization efforts. EIS helps to develop a pool of international business management and trading expertise. EIS's activities are divided mainly into three areas: International Executive Programmes, Skills Development Programmes and Market Information Conferences.

a. *International Executive Programmes:* These are full time structured courses on export marketing and international trading designed to develop skilled exporters and traders. They cover various disciplines and are multi-faceted in nature from diploma programmes to short certification courses.

b. *Skills Development Programmes:* Such programmes are specialised courses which focus on specific skills needed by export marketers and international business executives. There are nearly 60 different kinds of wide ranging courses organised to meet the needs of the industry.

c. *Market Information Conferences:* Through seminars, conferences and workshops, EIS disseminates timely information on business opportunities and provides avenues for business networking. The aim is to keep Singapore companies well informed both of business opportunities and of new developments in overseas markets. Such conferences also allow Singapore companies to network with key foreign government officials and businessmen.

Interactions with the Business Community

In order to identify the nature of relationships and interactions the public sector agencies have with the business community, the following research question was formulated:

Research Question 2: What are the expectations of Singapore-based companies from key public sector agencies for the supply of required skills and competencies through national HRD strategies?

The survey findings were analysed using the appropriate statistical tools for responding to the above research question. The results are presented through the following three tables:

Table-1: Expectations from Agency-A on National Human Resource Development Strategies

	STATEMENT	N	M*	S.D.	NOT AWARE	
					NO.	%
a.	Company is aware of the agency's HRD efforts and other programmes	81	4.48	1.40	13	13.9
b.	A Evaluates manpower capability to support overseas investments	84	5.00	1.04	9	9.7
c.	A Evaluates supply of required skills to support overseas investments	82	5.06	1.02	10	10.8
d.	A is Capable to react fast by providing support to potential investors	90	5.03	1.14	3	3.3
e.	A Provides support to certain industries only	88	5.34	1.04	5	5.4
f.	A Should provide support to other sectors	91	5.64	1.16	2	2.2
g.	A Should be directly involved in manpower training	90	5.09	1.31	3	3.2
h.	A Should take the leadership in HRD	92	5.50	1.24	1	1.1
i.	A Should inform business community	92	5.96	1.07	1	1.1
j.	Other issues mentioned	6	6.67	0.52	-	-

* (1=Strongly disagree,....7=Strongly agree)

It may be observed from the above table that most respondents agreed agency-A should inform the business community through newsletter/information materials on Manpower and Skills Development plans (M=5.96.). It was also found from the distribution of the respondents that nearly 90% of them agreed to such a statement. There seems to be a problem in information flow from Agency-A to the business community. One probable explanation may be due to this agency's active involvement in the macro aspects of developing the manpower of Singapore, and it did not pay much attention in keeping the Singapore-based companies informed of their plans. In addition, it was found that a majority of the respondents agreed that the agency should provide necessary support to other sectors along with manufacturing (M=5.64). Respondents also agreed that the agency should take the leadership for co-ordinating with other relevant agencies in formulating directions for Manpower Development in Singapore (M=5.50). This is probably due to the emphasis made by the Committee on Singapore's Competitiveness (CSC) to promote the twin engines (manufacturing and services sectors) to enhance Singapore's competitiveness.

Table-2: Expectations from Agency-B on National Human Resource Development Strategies

	Statement	N	M*	S.D.	NOT AWARE	
					NO.	%
a.	Company is aware of the agency's HRD efforts and other programmes	89	5.60	1.28	5	5.3
b.	B provides adequate publicity of various training courses	88	4.93	1.4	6	6.4
c.	Company receives information about training courses regularly from B	89	4.97	1.70	5	5.3
d.	B's Courses are relevant for skills development	87	4.56	1.4	5	5.4
e.	B's Courses suit future needs of Singapore	87	4.41	1.19	5	5.4
f.	SDF grants is very useful for skills development	89	5.26	1.58	3	3.3
g.	Company is aware of the "People Developer" programme	78	5.51	1.50	14	15.2
h.	B Invites suggestions from company	76	3.43	1.46	15	16.5
i.	B Should interact more frequently with private companies	88	5.81	0.99	3	3.3
j.	B Should work more closely with other educational institutions	88	5.99	1.06	3	3.3
k.	B Should take the leadership for national HRD	89	5.18	1.41	3	3.3
l.	Other issues mentioned	6	6.67	0.52	-	-

* (1=Strongly disagree.....7=Strongly agree)

It was interesting to observe that Agency-B seldom invites suggestions from local companies with regards to training and Manpower Development (M=3.43). It was also noted that only one-fifth of the respondents agreed that this agency has approached them in the past for suggestions on such issues. The results showed that the Manpower Development Division should interact more frequently with private companies (M=5.81). In addition, the agency should work more closely with educational institutions (e.g. ITEs) to prevent duplication of efforts (M=5.99). Results from the above three statements seemed to suggest that only a very few selected organisations were invited to participate in the agency's pilot-testing phase in which feedback were gathered and changes were made before the programmes were introduced formally. The secondary information indicated that the agency had not developed its new manpower programmes in isolation, rather it had always consulted with experts from the relevant fields during the process of new programmes development (Job-Redesign 21.and the CREST programme). Respondents were asked whether they were aware of the agency's HRD efforts and other programmes, and a relatively high mean score (M=5.60) indicated their awareness in this respect. This may be due to its active involvement in Manpower Development after it took over the functions of its predecessors (NPB & SISIR). It has also initiated a number of successful National Manpower Development programmes that served as important stepping-stones in helping the workforce of Singapore progress towards a knowledge-based economy.

Table-3: Expectations from Agency-C on Human Resource Development Strategies

	Statement	N	M*	S.D.	NOT AWARE	
					NO.	%
a.	Company is aware of agency's HRD efforts and other programmes	75	4.13	1.30	17	18.5
b.	C's programmes are useful in providing support	79	4.78	1.37	11	12.2
c.	C's courses meet future needs of Singapore	72	4.22	1.28	18	20.0
d.	C holds regular meetings and dialogue sessions with international trading logistics companies	65	4.29	1.31	25	27.8
e.	C invites suggestions from other sectors of business	65	4.08	1.14	25	27.8
f.	C's business Library and publications are useful in giving market intelligence and in helping to raise quality of skills development	65	4.54	1.24	25	25.8
g.	C should play a more active role in manpower development	83	5.17	1.22	7	7.8
h.	C should play a more active role in developing diploma courses	84	5.33	1.08	6	6.7
i.	C should conduct more research and organise more relevant courses	84	5.15	1.40	6	6.7
j.	C's role should include strategic manpower development programme	86	4.84	1.47	4	4.4
k.	Other issues mentioned	2	7.00	0.00	-	-

* (1=Strongly disagree,....,7=Strongly agree)

Results show that 27.8% of the respondents were not aware that agency-C holds regular meetings and dialogue session with international trading and logistics companies to discuss the Manpower and Skills Development of Singapore. Another 27.8% of the respondents were not aware that the agency invites suggestions from other sectors of business to discuss the Manpower and Skills Development of Singapore. In addition, 18.5% of the respondents indicated unawareness of the agency's HRD efforts and various programmes. The above findings may be explained by the lack of publicity of the efforts rendered and activities conducted by the agency. The information available from the Internet website and other media were also found to be quite limited.

Differences were observed among the key public sector agencies in terms of their interactions with business community. Agency-B was found to have developed more awareness among the companies in terms of their HRD efforts and initiatives. Companies expect the government agencies to keep them informed on their various HRD programs and future plans on national manpower development. It was observed that the agencies vary in their primary focus on different industrial sectors, and provide leadership in helping the companies of that specific sector for the availability and development of required manpower. Public sector agencies were also found to draw upon experiences of other countries' manpower development strategies. They continuously observe and monitor the unique features of strategic HRD programs of other successful countries across the globe by travelling and interacting with key officials of those countries. In terms of taking primary leadership role in national manpower development strategies, companies expect that the newly formed Ministry of Manpower (MOM) should co-ordinate with one lead agency. But, there were differences in opinions among respondents as to who should be lead public agency in this regard. Majority of the respondents was not found to be aware of the future directions of national manpower development strategies, which they expect to know in order to plan for their future business activities.

Conclusions:

Role of public sector in national human resource development strategies is expected to vary among countries based on their economic, political and social environments, and the government policies. In the countries where public sector plays a significant role in strategic human resource development, such as Singapore, the relevant public sector agencies need to involve the business community in their strategy formulation and implementation decisions. The relevant and realistic inputs from business organizations would help the policy makers at the strategic national level to develop effective HRD programs and strategies, as well to efficiently implement those strategies. Companies expect to be aware of the policy directions and strategies taken for national manpower development, so that they can plan and organize effectively both on short and long-term perspectives.

Findings from this study will contribute to the knowledge of strategic Human Resource Development at the national level, where a significant research gap could be identified. Although some conceptual articles mentioned the need for close interactions between government, business & industry, and academic institutions, very little empirical work is available in this area. No empirical study was found to have addressed the issues of national manpower development in Asia, particularly studying the role of public sector in terms of the expectations of the business community. From this perspective, this study is expected to contribute substantially in substantiating the conceptual understanding and in future theory development. Finally, findings from this study will serve a basis for further research in this area through providing the necessary directions. Future study should include all the public sector agencies including the educational institutions. Moreover, expectations of the future graduates'/ employees' should be studied along with the larger business community, from a national manpower development strategy perspective in order to provide a more comprehensive coverage.

Based on the findings of this study, and extensive literature review, a conceptual framework could be proposed for better understanding of manpower development strategies of Singapore. The newly formed ministry of Manpower should lead the co-ordination and interaction of the various public and private sector agencies. All relevant government agencies, educational and training institutes, employer organisations, employee organisations should be represented in the formulation of national HRD strategies. The framework may also show the internal and external environmental factors that will affect manpower development strategies of Singapore. In the internal environment, important variables that will affect the manpower development strategies are economic, technological, political and demographic conditions in Singapore. Being a small economy, Singapore's manpower development strategies will also be influenced by the external environmental factors like global/regional economic, political, and socio-cultural and market conditions, and also the manpower development strategies of other relevant countries.

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Corporate Knowledge Management and New Challenges for HRD

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Corporate knowledge seems to have become as valuable an asset as physical resources such as capital and land in the post-industrial society. Knowledge as an intangible source of competitiveness poses new challenges to human resource development practitioners. The new challenges identified for human resource development include training and developing knowledge workers, developing managers and team leaders as knowledge coordinators, and building a knowledge- sharing culture.

Keywords: Knowledge Work, Management Development, Culture

Knowledge seems to have become a more valuable asset for business success than physical resources and capital in the post-industrial society (Boisot, 1998; Davenport & Prusak, 1998; Drucker, 1993; Stewart, 1997; Sveiby, 1997). Knowledge is, in nature, an intangible asset of firms competing in global economies. This intangible nature of knowledge requires different managerial strategies based on the perspective.

Successful knowledge management depends on whether employees understand how corporate knowledge adds value, how it is created, and why it needs to be managed, as well as whether they are willing to share knowledge among one another (Davenport & Prusak, 1998). Knowledge management presents new challenges for human resource development (HRD) practice and theory because the rise of knowledge work and knowledge workers demands new types of knowledge and skill training, career development strategies, manager and team leader development, and cultural change in organizations.

The purpose of this paper is to explore new challenges presented to HRD practitioners for successful knowledge management. Based on the extensive literature review, new challenges posed to HRD practitioners are presented.

Research Question

What are the new challenges presented to HRD for a successful knowledge management?

The Rise of Knowledge Work and The Knowledge Worker

Knowledge work and the knowledge worker reflect new conceptualizations rather than new phenomena since knowledge work and knowledge workers have existed for thousands of years. Shamans, philosophers, witch doctors, priests, and teachers have been around for a very long time, and historically have been considered knowledge workers in that they created and transferred knowledge and information (Cortada, 1998). It is, however, not until recent management concern for corporate knowledge and its management that this notion has been drawing the explosive attention of scholars and managers.

Knowledge work is defined as any work that requires mental power rather than physical power (Drucker, 1993). McDermott (1995) defines knowledge work more comprehensively, referring to analyzing information and applying specialized expertise to solve problems, generating ideas, teaching others, or creating new products and services.

The term "knowledge worker" first appeared in the late 1950s and owes its origin to Machlup, a distinguished economist studying knowledge and its creation, distribution and economic significance. In his seminal work *The Production and Distribution of Knowledge in the United States*, Machlup (1962) presented the idea that knowledge had became a major item of production within the U. S. economy. He also described a new class of workers, *knowledge-producing workers*, referring to those who create new knowledge and those who communicate existing knowledge to others. According to Machlup (1962), knowledge workers would include clerks, teachers, and researchers who were responsible for the entire spectrum of activities, from the original creator to the transporter of

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knowledge. Since the 1960s, Drucker has popularized the term *knowledge worker* in business management. When Drucker (1993) uses the term, he is referring to an executive or manager whose main work is less related to hand work.

More and more workers, however, use data and information, so that the breadth and depth of knowledge required by most people to perform their work is much greater than it was in the past. Work has become more complicated, requiring more sophisticated knowledge and information to differentiate product and services, as a result, there has been a growing need for knowledge with which to guide human behavior in a certain direction (Cortada, 1998). Moreover, business profitability depends on efficient management based on new tools and techniques, deep understandings and insights.

The knowledge component of everyone's work has increased dramatically (Allee, 1997; Stewart, 1997; Sveiby, 1997) whether it is agricultural, blue collar, clerical, or professional. For example, a Federal Express driver physically moves things, but that driver might also operate on-board terminals and telecommunications equipment, as well as navigate through traffic. In this broad perspective, every employee can be referred to as a knowledge worker in the post-industrial organization. Therefore, the knowledge worker refers to a class of worker whose work consists largely of handling information and knowledge, and in particular, transforming data and information to knowledge.

A Theory of Knowledge

While the dominant philosophers of each age have contributed their own definitions of knowledge. Working definitions of knowledge, knowledge hierarchy and its transformation are the main focus in this paper.

According to the tradition of western philosophy, knowledge is argued to be "a set of justified true beliefs (Nonaka & Takeuchi, 1995, p. 58)." This definition requires three conditions of knowledge. It needs to be *justified* by the knower as *true*, which ultimately constitutes the *knower's belief* with a potential to lead to action. Knowledge goes through the process of justification while it is created, transferred, shared, disseminated, and discarded on a daily basis through formal and informal interactions among employees or individual reflections in organizations.

Many researchers have attempted to capture the nature of knowledge and presented several characteristics: knowledge is tacit, explicit, implicit, action-oriented, personal, constantly changing, self-organizing, and socially constructed (Brooking; 1996, Fisher & Fisher, 1998; Nonaka & Takeuchi, 1995; Polany, 1966; Sveiby, 1997). Among those characteristics of knowledge, the one that might explain why knowledge management has become a critical issue in business is *actionability*.

Knowledge is actionable in that it enables employees to discriminate things or events and enormous amounts of data and information, and in turn, to choose a particular course of action instead of another (Lyles, Kroh, Roos, & Kleine, 1996; Sveiby, 1997; Vicari, Krogh, Roos & Mahnke, 1996). Unlike data and information, knowledge contains judgment based on belief (Davenport & Prusak, 1998). Thus the definition of knowledge includes belief. This discriminating power of knowledge enables firms to behave differently from others, and ultimately to create new value in the market.

Knowledge management refers to the explicit and systematic management of vital knowledge and its associated processes of creating, gathering, organizing, sharing, and exploiting (Bassi, 1997). Corporate knowledge management is based on the assumption that identifying and facilitating the processes of knowledge (i.e., creating, organizing, transferring, disseminating, and storing) are necessary for a firm to maintain its sustainable competitiveness.

Knowledge Hierarchy and Transformation

Although information and knowledge often are used interchangeably, it is important to differentiate the interrelated concepts of data, information, and knowledge (Allee, 1997; Sveiby, 1997). Thinking of those concepts as similar or synonymous fail to understand the dynamic nature of knowledge and its management. Data are symbols that represent the properties of objects and events (Ackoff, 1994). Information is defined as the "meaning that human beings assign to incoming data (Marshall, Prusak & Shpilberg, p.229)." Such a differentiated understanding could be visualized by the following figure of a knowledge hierarchy. According to this figure, information is obtained as a result of transformation of data. This upward movement makes previously invisible meaning, connections, and patterns among data understanding one (Nonaka & Takeuchi, 1995). Knowledge is more highly contextual than information in that information transforms into knowledge under the influence of context. The context can include situations, relationships, assumptions, expectations and prior events (Whitaker, 1996).

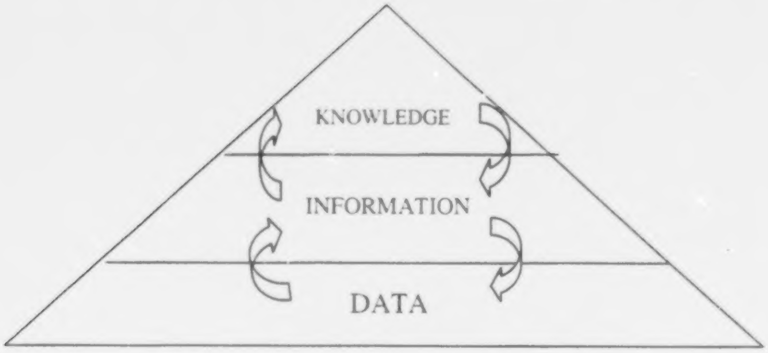

Figure 1. Knowledge Hierarchy (adapted from Allee, 1997).

Moving downward in the knowledge hierarchy also adds a dynamic nature to knowledge. One person's knowledge is another's information or even data (Stewart, 1997; Sveiby, 1997). At the moment when a person's knowledge is articulated, it transforms into information or even data to the receiver. This transformation happens because articulated knowledge in verbal or written language is meaningless unless the receiver gives it meaning. For example, the enormous amount of data in the Congressional Library or on the Internet is meaningless unless that information is transformed into knowledge by the receiver. In this respect, some even argue that information is, as such, meaningless (Sveiby, 1997). Knowledge is what information becomes when it is interpreted and given meaning.

The process in which knowledge is created and constructed is complex. Some researchers have tried to describe those complex processes of knowledge creation based on the classification of types of knowledge (Brooking, 1996; Nonaka & Takeuchi, 1995). Nonaka and Takeuchi (1995) suggested two types of knowledge adapted from Polany's theory of tacit knowledge. Their insight is that knowledge is created by an interaction of two types of knowledge (tacit and explicit), which creates four modes of transformation: socialization, externalization, combination, and internalization.

Socialization (tacit to tacit) is a process of tacit to tacit transformation through sharing experience and thereby creating tacit knowledge, such as shared mental models and skills. This process creates knowledge through conversation and reflections.

Externalization (tacit to explicit) is a process of articulating tacit knowledge into explicit concepts. The move from tacit to explicit implies codifying something, thus making it accessible to everybody. In spoken words, the tacit knowledge takes the form of metaphors, models, concepts, and equations, which express in a reduced and somewhat distorted form of the tacit knowledge of an individual.

Combination (explicit to explicit) is the process of systemizing explicit concepts into a knowledge system, that is, combining different bodies of explicit knowledge into new explicit knowledge by analyzing, categorizing, and reconfiguring knowledge. Databases and computer networks are the new tools for this kind of knowledge transformation. However, as knowledge cannot at present be created either by computers or by books, there cannot be a direct explicit to explicit knowledge transfer. Explicit to explicit transformation can involve only data or information because it must be interpreted by a human mind to become knowledge.

Internalization (explicit to tacit) refers to the absorption of explicit knowledge into tacit knowledge. It is closely related to learning by doing (Sveiby, 1997). This process requires somebody to access codified documents and learn from them. Reading books or reports is a typical example of the internalization.

These movements of knowledge along the tacit-explicit spiral essentially are events of knowledge sharing (Nonaka & Takeuchi, 1995; Sveiby, 1997). Where there is no knowledge sharing, there may be little knowledge creation. The issue of knowledge sharing is, therefore, crucial for knowledge management.

New Challenges for HRD for Successful Knowledge Management

Since knowledge influences or is influenced by myriad aspects of the organization, it is essential to identify key factors that contribute to the success of knowledge management. From an HRD perspective, three critical factors are necessary for knowledge management efforts to be successful: a) training and developing knowledge workers, b) developing managers and team leaders as knowledge coordinators, and c) building a knowledge-sharing culture.

Knowledge Worker Training and Development.

Knowledge workers need to have knowledge transformation competency and skills, including that for using cutting edge technology. They must be aware of and understand the importance of an intangible asset and its management. In addition, knowledge work team building will facilitate the knowledge management process.

Knowledge transformation competency building. Exploring what competencies differentiate knowledge workers from industrial workers and how to develop those competencies is beyond the scope of this article. It is, nonetheless, evident that the skill requirements of knowledge work create new demands for employee training and development. Knowledge hierarchy and its modes of transformation shows that knowledge transformation competency is required for the knowledge worker. Knowledge transformation competency refers to the knowledge workers' capability that enables them to perform four modes of knowledge transformation.

In particular, the internalization competency is critical because knowledge workers search, collect, analyze, and reduce data and information, internalize and create new knowledge on a daily basis. Throughout the internalization mode, data and information reduction and analysis skills are likely to play critical roles in transforming data to information to knowledge because knowledge workers encounter enormous amount of data and information exploding in and outside the organization. Without having tools necessary to reducing data and information, knowledge workers may not be effective in decision making or problem solving.

Continuous technology training. A technology infrastructure is a necessary element for successful knowledge management, as is employee training in using cutting edge technology. Current communication technologies including the computer, video-conferencing, and the World Wide Web accelerate the speed of sharing knowledge and provide rich sources for business decision making. Constant and drastic developments in technology require knowledge workers to stay up-to-date and advanced in technological knowledge and skills through continuous technology training and learning.

Knowledge awareness training. Employees at all levels in the organization should be aware of the value created by intangible assets compared to physical assets. They should also be aware of how knowledge is created, shared, and distributed in the organization. Awareness is necessary, because according to a survey by the American Productivity and Quality Center, the number one reason that knowledge was not being shared was because employees either did not know that knowledge existed in their organization or did not realize that their knowledge would be valuable to others (Ostro, 1997).

Every employee needs to understand that knowledge is the firm's most vital asset to sustain a firm's competitiveness (Davenport & Prusak, 1998). Unlike physical assets whose value decrease increasingly due to the law of diminishing returns, the value of knowledge increases the more it is used and shared (Stewart, 1997; Sveiby, 1997). Knowledge and intellect grow exponentially when shared as people gain information and experience through feedback questions, amplifications, and modifications.

Knowledge work team building. Knowledge transformation can take place not only at an individual level but also at a team or group level. As teams become the dominant work units in organizations (Dyer, 1995), team members play a critical role in knowledge transformation. If knowledge is not shared with others or is not transformed at the team level, knowledge will not grow into the organizational level.

Team building will facilitate the socialization mode in which team members share their experiences and mental models. Meaningful dialogues and discussion among team members will accelerate the externalization mode. Metaphors and analogies are expressive tools enabling team members to articulate their tacit knowledge, otherwise hard to communicate (Nonaka & Takeuchi, 1995). Team members are also engaged in the combination mode when a new concept formed by the team is combined with existing data as wells as with knowledge that resides outside the team. Finally, team members perform in the internalization mode when they interpret the new explicit knowledge by reframing and deepening their own tacit knowledge.

Development of Managers and Team Leaders as Knowledge Coordinators

Although every employee is responsible for creating and sharing new knowledge, roles and responsibilities vary from front line employees to middle managers to senior managers. Furthermore, the contributions of knowledge workers are better determined by the importance and quality of knowledge they produce than by their status in the organization (Nonaka & Takeuchi, 1995).

Middle managers play the role of *knowledge coordinators* in the knowledge transformation process. The role of knowledge coordinator is to synthesize the tacit knowledge of both front-line employees and senior executives, make it explicit, and incorporate it into new products and technologies. They work at the intersection of the vertical and horizontal flows of information within the company. The knowledge transformation process is coordinated by middle managers, who are often leaders of a team or task force, involving both top and front-line employees.

The core processes for creating organizational knowledge takes place intensively at the team level. Direct and meaningful dialogue within the team stimulates externalization. Through these dialogues, team members articulate their own thinking, sometimes through the use of metaphors or analogies, revealing tacit knowledge. Therefore, team leaders also play the role of knowledge coordinator.

Managers and team leaders must be able to a) decide what business goals the codified knowledge will serve, b) identify knowledge existing in various forms appropriate to reaching those goals, c) evaluate knowledge for usefulness and appropriateness for codification, and d) identify an appropriate medium for codification and distribution (Davenport & Prusak, 1998).

Building A Knowledge Sharing Culture

Knowledge sharing must be encouraged and rewarded. Participation in the network needs to be factored in all promotion and compensation reviews. The firm should reward the author of frequently referenced ideas and knowledge (Klein, 1998). At one consulting firm, consultants are expected to document what they have learned about what works and does not work in their consulting and are partially compensated based on how often their documentation is accessed from a central knowledge repository (Marshall, Prusak & Shpilberg, 1996). Incentives encouraging knowledge sharing worked as a catalyst for successful knowledge management in this firm.

The natural tendency of reluctance to knowledge sharing, however, presents another challenge for HRD. Competition among workers for promotions or pay raises and the notion that a worker's knowledge is their power base inhibit the sharing of knowledge. How to get people to share knowledge will be a crucial question for knowledge management.

HRD needs to build an ethic of open communication where discussion and constructive feedback are encouraged. Moreover, trust is positively related to personal contact and open communication (Wathne, Roos, & von Kroh, 1996). Some firms have set up "talk rooms" to encourage the frequent and creative exchange of knowledge. Corporate picnics and knowledge fairs where people gather and exchange knowledge are other good examples. Tacit knowledge transfer generally requires extensive personal contact. The transfer relationships include partnerships, mentoring, or apprenticeships (Davenport & Prusak, 1998). In short, HRD practitioners need to facilitate the human network to encourage the free flow of knowledge.

Conclusions

Knowledge as an intangible asset is not only opening a new era of organizational competitiveness and but also poses new challenges to HRD. This paper identified new challenges posed to HRD for successful knowledge management.

First, the rise of knowledge work and knowledge workers has created a demand for new types of knowledge worker training and development in such areas as knowledge transformation competency building, continuous technology training, knowledge awareness training, and knowledge worker career development. Second, the managers and team leader's roles as knowledge coordinators should be maximized to play a key part in creating and managing corporate knowledge. Third, HRD should facilitate a culture of knowledge sharing through removing the barrier to the free flow of knowledge and building multiple channels of knowledge transfer, including space for personal contact as well as electronic contact. Finally, a knowledge-oriented culture should be built into the organizational structure through the emphasis on human value, recruiting and selection, and the cultural alignment of knowledge management.

HRD is expected to play a role in developing and unleashing human expertise through organizational change, training, and development (Swanson, 1995). Unleashing and developing human expertise will facilitate the process of knowledge creation and sharing in that the process of making one's own knowledge explicit and shared with other members of the organization accompanies the efforts to employ one's own knowledge and experiences and create new ones.

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The Impact of the Corporate University – Case Study Analysis of Developments in the UK

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In this paper, the notion of 'corporate university' is treated as problematic, conceptually undeveloped, and warranting closer scrutiny. The paper subjects it to a critical review from a strategically oriented HRD perspective, based on a theoretical explanatory model developed from an earlier study of practice primarily from the US. At a specific level it draws upon case study examples in the UK in order to test whether the model can support subsequent in- depth primary and comparative analysis and explain similarities and differences between UK and US approaches. At a more general level it evaluates what if anything do corporate universities offer that a) is distinctive from previous in-house training/HRD provision and b) that justify the appellation 'university'.

Keywords: Corporate University, UK, Theoretical Model

Inspired by an original idea generated at the Walt Disney Company, the notion of a corporate university is becoming increasingly fashionable as an overarching designation for formal learning and knowledge creating activities and processes within an organisation. At the time of writing some 1600 are held to be in existence, a 40% increase from 1997 and a 400% increase from 1990 (Meister 1998b). In North America they are particularly common and the evolution of some, such as the Motorola University, well documented. Others from the USA include Air University, the arm of the US Air Force responsible for providing professional military education, and the National Defense University. General Motors Corporation announced the launch of General Motors University in 1997. In the UK they are an emergent post 1990 phenomenon with, for example, Unipart University well established, Anglian Water having developed a University of Water in 1995 and British Aerospace having launched the British Aerospace 'Virtual' University in 1997. A number are at a very early stage of development such as Lloyds TSB, Ernst and Young Virtual Business School, and Royal & Sun Alliance. Sherlock (1999) believes that corporate universities like Lloyds TSB and Unipart U are the first waves of a rising tide. Trasler (1999) suggests that the 'corporate university philosophy should soon be as integral a part of British business life as it already is in the USA'. There have been a wave of conferences in the UK over the last twelve months including two Corporate University weeks organized by the International Quality and Productivity Centre (IQPC), a three day symposium organised by Corporate University XChange, a one day seminar and site visit organized by the University Forum for HRD at Unipart U, and a one day seminar on the New Model Universities jointly sponsored by ICL and the Independent newspaper. On the other hand, perhaps because of the newness of the concept, there are suggestions that corporate universities are 'an easy target for derision' (Swann 1999) and 'could disappear, being seen as a fad of a particular time or an expensive overhead' (Walton 1999, p434). This paper subjects the concept and practice of corporate university in the UK to a critical review through a case study analysis of five organisations.

Theoretical Framework:

In theoretical terms, until recently little has been written that underpins the concept of 'corporate university' or accounts for the current popularity of the term (Walton op cit). Meister (1994, 1998a) provides a synopsis, although her approach veers towards the descriptive and normative as opposed to the analytical and evaluative. For example, Meister makes the unsubstantiated assertion that whereas 'a training department tends to be reactive, decentralised, and serves a wide audience with an array of open enrolment programmes', a corporate university 'is the centralised umbrella for strategically relevant learning solutions for each job family within a corporation' (Meister 1998a p267). She also suggests the term *university* is preferred to *enhanced training department* because 'learning is important and by using the metaphor of a university the intent is grand'. In this she follows Motorola where the word *university* is seen as 'being ambitious but is designed to arouse curiosity and to raise the expectations of both the work force and the training and education staff. It could have been termed an 'educational resource facility', but that would not have animated anyone' (Wiggenhorn 1990). Carnall (1999) states that there are long established examples

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of organisational practice wherein education and work have been integrated but what gives corporate universities their uniqueness is 'the greatly enhanced focus upon value'.

He suggests that the emerging model of the corporate university' seeks to integrate the concern to educate, the concern to develop new knowledge, a focus on 'qualifying people', with a concern to balance individual and corporate value from the investment in education' (ibid). Aubrey (1999) argues that a corporate university is usually the most visible component of a Human Resource strategy, fulfilling the following conditions: it is strategic; top management is involved; it has responsibility for maintaining and enhancing the value of strategic knowledge and core competencies; it addresses itself to all employees not just the management layer; it often has proprietary programs that transfer key corporate knowledge; it constitutes an independent resource of HRD from personnel; and can be virtual with no physical facilities especially where strategic knowledge is spread out geographically and transmitted on-line. He further proposes three major types of corporate university, giving practical examples of each: 1. a resource for technology development 2. a resource for quality or service development 3. a resource for people development.

This paper seeks to further test the theoretical explanatory framework presented in Walton (op cit) which proposes that corporate universities can be classified as first, second and third generation types.

First generation is represented by the Disney approach that has directly or indirectly influenced many of the subsequent waves of corporate universities up to the present. Typical features include a range, often quite narrow, of organisation-specific training modules requiring class room attendance; an emphasis within the programme units on the acquisition of corporate values; reference to the creation of a world class workforce; and in many cases careful attention given to providing extrinsic manifestations of achievement to programme participants. Second generation corporate universities can be defined as those that go beyond a dependence on a relatively narrow, and heavily value driven, culturally specific curriculum. They often tend to emanate from a desire to embed learning from TQM initiatives into the fabric of the organisation. The overall HRD framework is in turn broader and more encompassing. The most detailed exposition to date of how a large corporation has developed and implemented the idea of a more broad based second generation corporate university, was provided by Wiggenhorn (op cit) who offers a real flavour of the values and associated practices which Motorola attached to the concept in 1990. As described, it is still instrumentally focussed in terms of programmes delivered and approaches to delivery. Third generation universities demonstrate sophistication in terms of learning philosophy and a mature approach to HRD together with growing evidence of virtuality. Key phrases to be looked for that represent the growing level of maturity include `learning organisation`; `intellectual capital`; `knowledge creation`; `continuous learning`; `strategic learning partnerships`; `virtuality`. There is a strong sense of their being influenced by the concept that people and learning processes are the only true source of competitive advantage in a world where products can so easily be replicated. Many have emanated from the Total Quality Management (TQM) tradition represented by the second-generation type.

Walton (op cit) further proposes, based upon research into organisational promotional literature and other published materials of six corporate universities (McDonald's, Disney, Unipart, Rover, Boeing, Motorola) conducted by Master's degree students at London Guildhall University, that corporate universities can be further evaluated on two dimensions. One dimension looks at the extent to which corporate universities contribute to the strategic direction of the organisation. The second dimension looks at the extent to which they demonstrate a strategic HRD approach in terms of embedding learning into the fabric of the organisation's processes. He further suggests that most of them seem `to support the overall strategic direction of the organisations concerned. However, in terms of learning philosophy and a mature approach to SHRD, there are substantial differences, with a growing level of sophistication in some more recent examples (Walton ibid p434).

Figure 1 No<---------------------------- Alignment with strategic HRD -------------------->Yes

Generation 1	*Generation 2*	*Generation 3*
Disney McDonald's	Unipart (1994) Motorola (1990)	Rover, Boeing, Motorola (current)
Generic, on the job, technical skills. Cultural, Customer Service. Broader business context	Operates using U framework. Part of strategic fabric. Incorporates multi-level (relevant) campus-based learning	Personal agenda encompassed. Virtual facilities. Systemic approach

Yes<--------------------------- Alignment with strategic goals ---------------------->No

Research Question and Hypotheses:

The primary research question asks: Given the current burgeoning interest in, and rhetoric about corporate universities originating in the USA and now impacting in the UK, what do they mean in practice?

The paper tests the hypotheses that 1. Three different categories (or generations) of corporate university can be identified in organisation practice representing increasing degrees of sophistication in respect of orchestrating individual and collective learning. 2. First generation corporate universities represent little more than a re-badging of conventional training and development departments. Second generation corporate universities reflect a broader based strategy towards organisational learning but are still campus and location specific. Third generation corporate universities possess a virtual element to the learning process, and encompass a broad range of strategies for the development of 'intellectual capital'.

3. The corporate universities in the UK, because of their more recent origins, will demonstrate features more akin to second and third generation examples.

As a secondary question it also evaluates the extent to which corporate universities meet the criteria conventionally associated with 'university'. Criteria used are 'sponsorship of research'; 'openness of access'; 'focus on education' as opposed to 'training'; 'provision of high level qualifications'; 'evidence of scholarly activity and independence'.

Methods

The research is based on a number of case study investigations using qualitative methods including 'interpretive techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not the frequency of certain more or less naturally occurring phenomena in the social world' (Van Manan 1983). The 'representativeness' of each case was not determined on the basis of statistical generalisation but in terms of possibilities for theory extension (Stake 1995). Initial data collection, was primarily by means of a literature review of corporate universities both in the US and the UK supported by company documentation. Confirming evidence on current practice was obtained from attending, both in the USA and the UK, a number of conference presentations on the topic and subsequently meeting with some of the presenters to obtain further clarification. A secondary interpretative analysis was then undertaken to provisionally position each 'U' within the Walton (op cit) classification system. In the UK a more detailed case study analysis of a few corporate university initiatives was then conducted by means of in-person and telephone interviews, Email correspondence, surveys and site visits to position them within the proposed classification system and compare them against each other.

The analysis was supported by asking respondents the following questions: *History*: When did your Corporate University start? Who initiated it? What was the thinking behind it? Why did you decide to have a corporate university? Why now (if new)? What is distinctive or new about the corporate university? What happened before? What used to happen? *Structure:* Who or what department in the company does the corporate university report to? How are you financed? What role does management play in corporate university? Are there faculty and boards of trustees/advisors? Who are they? How are they chosen? What positions do you have in the corporate university? What are their roles, titles, job description, pay and structure? Do you have a campus? Where does the staff come from? How are they selected? *Content:* What programs does your corporate university offer? What is the balance between education programs and job oriented training programs? What kinds of technologies are you using? Do you award certificate, degrees? *Internal/External Marketing:* What words are used to describe it and sell it? Who is the audience? Internal? External? Shareholders? Clients? Market? What kinds of staff incentives are there for learning? Do you use the word `university' in the promotional literature? In what way is your CU similar, in what way different from a conventional university? Where do you see learning taking place? *Partnership and Collaboration*: What relationship, if any, do you have with conventional universities? How are your educational partners chosen and measured for effectiveness? Why do you use the word `university' in the title? *Strategy:* What contributions do you see yourself making to the overall directions of the corporation? What are the criteria for success of the university? How do you measure the university effectiveness? Who gets access to learning? *Research and Development:* What sort of research do you sponsor? Is the CU research made public? *Current Practice*: How has your CU changed since it first began? Which most closely fits where you are now, first second or third generation? What do you hope to accomplish? How, if at all, has having a CU changed your recruiting strategies? How do you ensure continued buy-in from senior management and employees?

These questions were used as a guideline and modified according to the answers as they were received. However, for each case study, the objective has been to obtain information against each of the questions listed above. The respondents have been chosen on the basis of one or more of seniority; appropriate HRD role; and knowledge of the corporate university within the organisation in questions. It was fundamental that each person was able to operate as an authoritative and expert witness to the process. In a further attempt to authenticate data analysis we have compared the respondents' comments with published documentation and in some instances drawn upon direct observations through site visits. Following Morgan (1993 p302), we were focusing on tangible, observational and verifiable Class 1 data and less on respondents interpretive and attitudinal comments (Class 2 data) and subjective researcher interpretations (Class 3 data). Nevertheless we were interested in establishing why the word *university* was chosen and in what way it was seen to be different to other forms of learning intervention.

Results and Findings:

Unipart University

Data on Unipart `U' was obtained during a site visit in April 1999 supported by company documentation and other published materials. Unipart is one of Europe's biggest privately owned component makers for the automotive industry. Opened 1993, the Unipart University (`U') is not intended to be an add-on to the company's training but to be seen as `the training'. Particular themes are to educate factory floor employees in the principles of lean production, continuous improvement and managing new technology. In-house documents state that the `U' exists to foster a climate of learning and a continuous re-skilling culture with a focus on quality and customer service. All nine of the group's businesses have been designated a `faculty' and the managing directors of each, called 'deans', oversee policy under the chairmanship of a professor of motor industry management from a conventional university who was appointed as the first `principal'. The support staff - both trainers and personnel professionals - makes up the `core' faculty.

The `U' is seen as a catalyst for getting training onto the strategic agenda because it provides `a highly visible infrastructure for discussion on training with management involvement'. The activities of the `U' are mainly for employees, but increasingly, other stakeholders of the company such as customers, suppliers and the community attend courses and use the facilities. The whole offering is campus-based in a plush new suite on the ground floor of the group HQ building in Oxford, England. It incorporates the companies resorurce centre called the Learning Curve and a state-of-the-art facility with a lecture theatre, four training rooms and two small meeting rooms called the Learning Edge. All 623 in-house courses run by the 'U' have been developed and taught by Unipart managers and staff. The 'U' learning initiatives demonstrate a strong TQM ethos and include 1) a supplier development programme, called `Ten to Zero', that teaches people to measure the effectiveness of any customer-supplier relationship on a scale of zero to ten against ten principles, such as sharing information, time delays, number of defects etc. 2) an initiative where technology is used to bring structured, just-in-time learning and knowledge-building to the shopfloor through 'Faculty on the Floor' centres that are designed to help manufacturing employees solve production problems. They are equipped with Internet and Intranet access, video-conferencing, and videos and PC's for training. 3) quality circles called 'Our Contribution Counts' involving training in creative team problem solving techniques to help employees make improvements at the sharp end of the business.

Nevertheless, the emphasis on course delivered training, supporting a `lean enterprise' mission, gives the impression of a somewhat restricted and particular focus to its range of activities. Despite the 'U's claim to be a central plank in a learning organisation, there seems to be a limit to the range of learning and development concerns included within its ambit. Excluded from its sphere of operations are experiential learning, career development and other personal development activities. In that sense it echoes a number of the US second generation prototypes. There is no evidence of sponsorship of research; provision of high level qualifications or evidence of scholarly activity and independence. The focus is clearly on training as opposed to education.

University of Water

Data on the University of Water was obtained through telephone interview with a learning facilitator and face to face exchange with the Head of Learning and supported by company documentation and other published materials. In 1995, Anglian Water Ltd, one of the UK's privatised water companies formally accepted the term `University of Water' as a key plank in their attempt to become a `Learning Organisation'. The idea originated from Peter Matthews who was one of the first Directors of Innovation to be appointed in a British Company, and was developed in partnership with the Director of HR. The 'Aqua Universitas' aims to create work environments that promote learning, encourage knowledge-creation and enable collaboration with external partners, especially higher education. It was felt that the fourteen businesses could be organised into four key areas, or 'knowledge grounds', which would form the basis for learning and development: * Humanities and Social Science *Finance and Information Technology * Environmental Planning * Technology and Engineering. All business activities were held to fall into one of these areas. There is no Vice Chancellor or Rector or Provost for the university, but each faculty has a Dean, taken from the Board of Directors. Considered to be a 'virtual university', the Intranet provides for provision of knowledge. If any student wishes to obtain information on say, the benchmarking of customer service, there is, as my respondent put it, a 'reservoir of knowledge'. One of the roles that has been created within the HR directorate is that of 'Facilitator of the University of Water'. Facilitators tend to come from an operational background, and have the responsibility of acting as Internal Consultants to the 14 business units. In addition, each business unit has its own 'learning champion'.

In common with many organisations, University of Water has developed relationships with universities whereby in-house programmes can be offered which lead to the award of the university degree. Anglian Water is not competing as an awarding body. Comments from respondents include: 'Even though the University of Water is not tangible and you can't visit anywhere it has had a positive effect on developing the concept of learning within the company.' 'It has raised the profile of learning and given our organisation a more strategic approach to learning.' 'It is moving towards managing outside relationships with conventional universities for self-managed honours degrees, cultural development, organisation in transition skills and technical skills.' Recently 'the University has been 'put on ice for a while' because of impending downsizing/redundancies'. This brings into sharp focus the questions round the long-term survival of these initiatives. Compared to the earlier Unipart 'U', the University of Water seems to be more broad ranging in scope, and in many respects more advanced in concept. The links with what is held to be a 'learning organisation' are more clearly drawn out, and there is a sense that knowledge creation and generation, as opposed to skills acquisition are important.

British Aerospace Virtual University

Data on British Aerospace 'Virtual' University was obtained through a face to face exchange with the Managing Director and Vice Chancellor in September 1999 and a telephone interview with a member of the 'Virtual' University staff. Launched in 1997, the university's mandate is to 1) catalyse, capture, communicate and embed internal and external best practice to engender business excellence 2) align and develop existing programmes and processes which support personal learning, research and development and 3) to provide knowledge and expertise to support strategic development. It is not a campus university, but a 'virtual' university, in which the 39 sites both in the UK and abroad are connected via the Intranet.

There are three faculties: The *Faculty of Engineering and Manufacturing Technology* covers traditional Research and Development type activities and has developed links with mainstream universities in order to keep at the forefront of technology development. It is hoped that it will seek out new directions in the interdisciplinary development of engineering research and technology relevant to the future policy and competitive position of the company. This faculty seems to be quite 'concrete' as opposed to 'virtual', since it is based on existing, location-specific, functional activities. The *Faculty of Learning* is intended to motivate, facilitate and support personal and company-wide learning. At the individual level, it is intended to reach out to all of the 44,000 employees, most of whom do not have degrees and for whom the notion of 'going to university' might be seen to be elitist. The outcome should be to ensure new skills and competencies and an ongoing responsiveness to company policy issues. At the organisational level, it is seen as a major component in the overall driving concept of a 'learning corporation', based on the concept of world class learning and supported by 'research' partnerships forged with external universities and further education providers operating in multidisciplinary virtual teams. The *International Business School* is intended to provide a focus on the rapidly evolving business climate for executive and management development, corporate learning, business process improvement, benchmarking and best practice, as well as to undertake strategic studies in support of marketing and strategic planning. Within the Business School is located a Corporate Learning Unit, with staff operating as 'knowledge brokers' for purposes such as benchmarking. Additionally, it incorporates a research centre defined, as a central resource towards the identification, acquisition, adoption and delivery of technology in response to business needs. There is also a 'best practice centre' designed 'to secure maximum competitive advantage from benchmarking and knowledge sharing across British Aerospace and its partners'.

The overall philosophy is to see the university as the future 'intellectual engine' of British Aerospace. Additionally, it will provide educational opportunities for partner companies, customers and suppliers. The 'U' does not award its own degrees, but partners with leading edge conventional universities and colleges. Each faculty can be expected to find its own university partners, recognising the fact that expertise across the range is not contained within one particular university environment. Currently there is no intention to have their own in-house professors, but that will not exclude the notion of visiting professorships. The 'U' is intended to be an integral part of the business, governed by a Strategy Board made up of senior directors from across the company along with respected figures from the academic and business world. Each faculty has a dean, appointed from within the company, and a Faculty Advisory Board. Each business will also have its own nominated `Champion of Learning'. The vice-chancellor contended that `British Aerospace wants to develop people across the organisation - this is seen as the key to the future. The 'U' increases the company's ability to offer educational opportunities relevant to the business and to as wide a cross section of the work-force as possible. Whilst other companies in Britain and abroad have set up their own training institutes to address their individual needs, the British Aerospace Virtual 'U' is unique. It combines continuous learning with research and technology acquisition: with strategic development focussed directly on the local and global needs of the business and our employees'.

Interior Academy

Data on this case study was obtained by interviews with the Director of Innovation, Human Resource Director and Head of Technical Services and a site visit in October 1999. Interior Services Group, plc is a group of companies specialising in high quality, complex, interior constructions and refurbishment of offices, retail premises and leisure facilities. They provide a service to occupiers and retailer and are involved in construction management, contracting, design and build, interior and exterior renovation, building restoration and post occupancy projects. Founded in 1989, to provide a specialisation in interior construction they now have a cumulative turnover exceeding £500 million. Their clients include a wide range of blue chip clients including banks, government departments, and firms of accountants and solicitors, property and media companies.

Interior's corporate university is currently located at a physical centre in London, which is called `The Interior Academy'. The CEO, David King who is also the founder of the company, drives the whole notion. He appointed a Director of Innovation, a member of the Board of Directors, to run the Academy in partnership with department heads. The 'Academy' will be expanded in Spring 2000 because, due to a series of mergers and acquisitions, the organisation has grown in 1999 from five hundred employees to two thousand. The goal is to develop their corporate university by tying it more closely with the business goals of the organisation and utilising it to help communicate corporate culture. To that end, a project is underway for the Academy to provide a mini-MBA for its senior management in partnership with a conventional university. The notion of 'corporate university' is seen as a key source of competitive advantage. The goal is to eventually sell their training related programmes and products to other organisations within the sector. The data obtained indicates that the 'U' has many features of a first generation corporate university and is no more than a re-badging and extension of existing training, which focuses on largely job specific courses that are delivered face-to-face. Courses range from health and safety workshops to presentation skills and are delivered by in-house staff and external consultants.

Lloyd's TSB

Data on this case was obtained by an interview with the Senior Manager of University Policy Development in December 1999 plus published data. Lloyds TSB is in the banking sector and employs 77,000 people throughout the UK. In July 1999, the University for Lloyd's was launched to create 'career long' learning opportunities for its employees. It was based on the UK government model of a 'University for Industry' (UfI) and influenced by the government white paper called the Learning Age that spelt out possible approaches for life long learning for UK citizens. Following the UfI guidelines, the University for Lloyd's has two specific aims: 1. to make learning more accessible to their employees 2. to link learning with business needs. Lloyd's felt it was important to use the word `university' for its initiative – our respondent said that the word university was seen as a synonym for universality to imply inclusiveness - and got permission from the Privy Council to do so. According to the Council, the word `university' could be used only if Lloyd's called themselves a `corporate' university and created training only intended for Lloyd's staff. The 'U' was seen to represent a considerable source of competitive advantage. First it was launched to 5,000 senior employees at a conference in Birmingham secondly at the House of Commons. The employee launch was carefully guarded and kept under wrap until the big conference where it was announced, heralded in by a performance of the Coors, a popular band that is being used to market the Lloyd's brand. At this beginning stage, Lloyd's is consistent with a generation 1 corporate university having focused on revamping the training and development function, enhancing training programs that have worked in the past and eliminating training programs that have not worked. 70% of its training is face-to-face. The 'U' has three residential training centres within the UK with a 100-bed capacity. It employs a large number of trainers and consultants and has additionally developed partnerships with conventional universities. The 'U' has a call centre which employees and line managers call to get one-to-one, personal advice about best training options.

The 'U' is moving towards consistent branding and a virtual open learning component that comprises 30% of its offer. Currently, there are 1000 multimedia computers with CD-ROM capability incorporating self-paced computer training modules available within a 10 minute drive of any employee's work base. The Intranet plays a significant role in access to course information, scheduling and the delivery of training modules. In the three months after the launch of University for Lloyd's the Intranet had a record 10,000 hits. Comparatively, the Internet site had 1,000 hits in the same time period. There is no evidence of an intention of moving to a system of *faculties* nor of the use of terminology associated with third generation corporate universities.

Conclusions and recommendations

As we tried to collect data for our research we found that some UK institutions that are currently creating corporate universities see them as a source of strategic competitive advantage and therefore are quite cautious about discussing them. Others were very open, with respondents speaking with considerable fervour about the newness of approach which they feel is represented and how it puts them at the forefront of Strategic HRD practice. We also discovered a lot of rhetoric and hype in the way they were marketed, both internally and externally. Moving beyond the rhetoric the first conclusion is that the proposed theoretical framework has explanatory validity for substantiating hypothesis 1. Furthermore, we were able to differentiate on the basis of empirical data between a so-called first generation university, where the term 'U' seems to be used to badge or re-badge existing training departments through to a 'third generation' university, which is seen as a central plank of an attempt to become a knowledge-creating learning organisation (hypothesis 2). The evidence for hypothesis 3 was less clear. Of the five UK organisations studies, two reflected the first generation type, one the second generation and two the third generation.

Figure 2 No<---------------------------- Alignment with strategic HRD ----------------------->Yes

Generation 1	*Generation 2*	*Generation 3*
Interior, plc Lloyd's	Unipart	University of Water British Aerospace
Job specific training, narrow curriculum. Broader business context and culture	Operates using 'U' framework. Part of strategic fabric. Incorporates multi-level campus-based learning	Personal agenda encompassed. Virtual facilities. Systemic approach

Yes<---------------------------- Alignment with strategic goals ----------------------->No

Our secondary research question asked to what extent corporate universities meet the criteria conventionally associated with 'university'. Despite adopting the university label, and in some instances a faculty structure, the corporations studied did not achieve the curriculum range, broad-ranging academic expertise and research sponsorship of a conventional university; in many instances, developing partnerships with higher education to overcome this deficiency. The study brought to the fore the inevitable difference between the performance-driven learning imperative for corporations and the independence of thought required of a true academic community (see Figure 3).

Figure 3

	Unipart	Uni of Water	BrAerospace	Interiors	Lloyd's
Sponsorship of research	No	No	Yes	No	No
Openness of access	Yes	Yes	Yes	Employees only	Employees only
Focus on 'education'	No	Some	Some	No	No
Provision of high level qualifications	No	Through external partnerships	Through external partnerships	Not yet	No
Evidence of scholarly activity and independence	No	No	No, other than R&D	No	No

One of the limitations of the research emanated from the fact that in the UK the concept of 'corporate university' is relatively new and thus practical examples on which to ground substantive conclusions are few. A second limitation is related to getting sufficient access to USA examples in order to be able to conduct a quantitative survey and systematic field analysis. This in part relates to the rapid spread of practical examples in the USA - a purported 40% increase since 1997 which it has proved impossible to track. The research is accordingly exploratory, conclusions tentative and the proposed analytical framework needs further testing for validity.

How this research contributes to new knowledge in HRD:

This research provides a comparative study, which has not previously been undertaken between corporate universities. In so doing it has provided empirical testing of a framework for differentiating between corporate universities in terms of their level of strategic HRD sophistication. It provides evidence that some of the more recently formed corporate universities are moving towards becoming third generation non-campus 'virtual entities', with all employees being attached to location independent faculties, and learning support being provided on a distance learning basis through the intranet. It also challenage the credentials of the corporate world for the implied claim that it can offer a 'university' education.

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Integrating Knowledge Management Into HRD to Improve the Expatriation Process

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Previous literature identifies the causes of the high rate of failure in expatriation. During the last five years there has been a growing body of literature on knowledge management. This paper explores the application of knowledge management to the process of expatriation, using the Palmer & Varner Organizational Decision Making Model for International Staffing. It is argued that systematic knowledge management may hold the key for improving the success rate.

Keywords: Expatriation, Knowledge Management, Training and Development

Problem Statement

Despite extensive research that identifies HRD issues related to expatriation, the success rate has not improved. One of the reasons is that organizations' participation in international business and expatriation involves processes that are cycles of events that are continually evolving. The literature on expatriation provides information about the HRD factors (selection, training, support, repatriation) that contribute to the success/failure of expatriates. What the literature does not tell us is how the organizations can maximize their achievement of organizational goals by capturing the knowledge held by expatriates within the organization. There is also an extensive body of literature on knowledge management emerging, some of which may be helpful to organizations in achieving their goals associated with expatriation.

It is the goal of this study to show how selected constructs from knowledge management can be helpful to management in optimizing the outcomes of the expatriation process. These gains may be realized by capturing the expatriates' knowledge gained. Specifically, we will examine the following research question.

Research Question

How can knowledge management be applied to the expatriation process to improve decision making and organizational outcomes?

Theoretical Framework

There are two components to the research, the expatriation process and knowledge management. This paper focuses on the development of a systematic approach to capture the knowledge reservoir of expatriates and apply it to the expatriation process.

Review of the Literature

Expatriation

Even a cursory reading of the literature makes clear that most Multinational Corporations have problems with implementing effective processes for expatriates. The failure rate is well documented. Shay and Tracey (1997) found that 25 to 40 percent of American expatriates return early if posted to developed countries. This increases to 70 percent if the expatriate is posted to a developing country.

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The difficulties start with the selection of expatriates and continue with training, support, and repatriation. Numerous studies identify critical characteristics the expatriate should possess for successful assignment abroad (Katz, & Seifer, 1996; Guzzo, Noonan, & Elron, 1994). Among these characteristics are prior overseas experience, curiosity, cultural awareness, relational abilities, and environmental factors (Black, Mendenhall, 1990; Mendenhall, & Wiley, 1994; Inkson, et al., 1997).

Training is believed to reduce failure rates by 14 percent, yet many companies still assume that a good manager is a good manager anywhere (Mendenhall, & Wiley, 1994). In addition, few companies match the characteristics of a potential expatriate with the cultural profile of the host country. To be successful, training must prepare the expatriate in three areas: technical, cognitive, and emotional (Nicholson, Stepina, & Hochwarter, 1990). Mendenhall, Dunbar, and Oddou (1987) list six reasons why companies are reluctant to provide training. They are: perceived ineffectiveness, lack of time, trend to employ host country nationals, high cost, no perceived need.

The lack of training is directly tied to a lack of support from the home country during expatriation. The lack of support in both professional and personal issues frequently results in premature repatriation and shortening of the assignment (Tung, 1981). The family is not given the necessary support to adjust to the new environment, and the expatriate frequently does not receive the support to develop the emotional and personal maturity necessary for expatriation (Shay, & Tracey, 1997).

While there are problems with selection, training and support during expatriation, the repatriation often is even more difficult. All too often expatriates leave the company after repatriation. Even if they stay, however, their knowledge and expertise are seldom used effectively to improve the institutional learning curve (Guzzo, Noonan, & Elron, 1994).

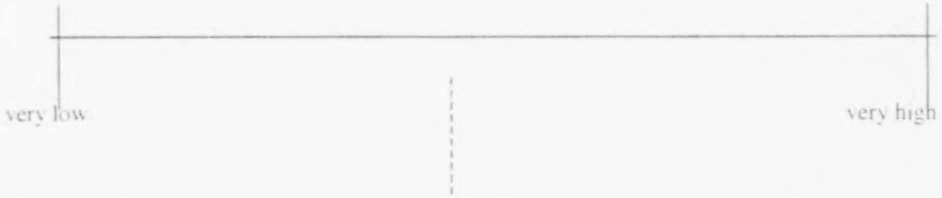
The literature clearly identifies the HRD factors that contribute to the success/failure of expatriates, but few companies are currently addressing those issues in a systematic and comprehensive way. As a result, the knowledge gained during expatriation by the expatriate, his/her co-workers and foreign counterparts is often lost.

One of the underlying reasons for the problems is that organizations typically do not systematically evaluate the optimal stage of internationalization. As a result, there is no cogent plan for determining the knowledge required by expatriates for various kinds of assignments. Palmer & Varner (1999) developed a model (see Figure 1) that integrates the expatriation process into the organization's strategic planning process. They identify decisions that must be made in three stages affecting the expatriation process. Stage 1 identifies the criticality/instrumentality of international operations to the organization. Stage 2 determines the nature of international assignments. Stage 3 determines the amount of human capital investment.

Figure 1 Organizational Decision Making Model for International Staffing

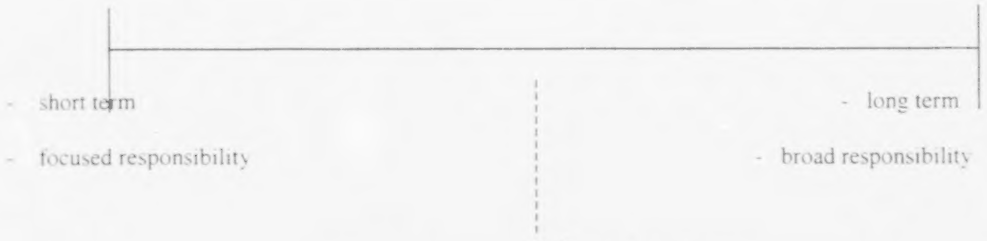
Stage 1: Determine the importance of international operations to the organization's mission and goals.

Continuum: Perceived degree of criticality/ instrumentality



Stage 2: Determine the Nature of International Assignments

Continuum: Scope and term of assignments



Stage 3: Determine Amount of Human Capital Investment

Continuum: Preparation for international assignments and integration of assignments into career development.

- minimal preparation for job specific assignment - travel assistance	- extensive preparation and support for assignments - international assignments integrated into career tracks within organizations

(Palmer & Varner, 1999, 170)

Knowledge Management

Increasing attention has been focused on the value to the organization of the knowledge and skills residing in employees ever since the pioneering work in human capital by Becker (1998) and Schultz (1960) in the 1960s. As the economy has shifted its primary emphasis from production/manufacturing to service to information, "...knowledge and human expertise are starting to be seen for what they are: the source of value creation" (Lank, 1997, P. 406). Effective use of intellectual capital is seen as a critical source of competitive advantage by many companies recognized as being leaders in their industries, including such firms as Andersen Consulting, General Electric, Motorola, Ernst & Young, NEC, and GTE (Prahalad & Hamel, 1990; Stewart, 1998; Culkin, 1997). Andersen's Global Best Practices research indicates that variances in learning and best practices can lead to performance differences of 100 percent to 300 percent among divisions within an organization (Martinez, 1998, pp. 88-89). Roger Schank (1997), Director of Northwestern University's Institute for Learning Sciences who worked with Andersen to develop its revolutionary training program for consultants, recommends capturing organizational experience and stories to use in designing virtual learning activities for training employees to meet performance expectations. Stewart (1997) believes that "... intellectual capital matters more than any other asset and must be managed explicitly, not left to fend for itself" (p. 154). The process that is used to manage intellectual capital within and among organizations is known as knowledge management.

Knowledge management has been the subject of many articles in the business and management press in recent years. The term knowledge management is generally accepted to refer to the purposive and systematic identification, capture, organization, and dissemination of tacit and explicit knowledge within an organization to improve organizational performance (Culkin, 1997; Prahalad and Hamel, 1990; Rossett and Marshall, 1999; Schwen, et al., 1998; and Stewart, 1998).

Drucker (1999) states that the greatest source of increased productivity and competitive advantage in the 21st century will be from an organization's knowledge workers and their productivity. He goes onto identify six factors that determine knowledge--worker productivity.

- The answer to the question, "What is the task?"
- Knowledge--workers must have autonomy.
- Continuing innovation must be part of the work.
- Knowledge work requires continuous learning and teaching.
- Quality of worker output is at least as important as quantity.
- Knowledge workers must be seen and treated as assets by the organization and they must want to work for the organization (Drucker, 1999, 83-4).

Drucker's factors provide a framework for interfacing knowledge management and expatriation to improve both expatriate manager productivity and the organization's performance. Expatriate managers, through their unique position that provides direct contact with the external environments of the global marketplace, are in a position similar to consultants. Both are knowledge workers. Sarvary's (1999) application of knowledge management to the consulting industry identified knowledge management as a business process through which firms create and use their institutional or collective knowledge (95). He identified the three sub-processes of organizational learning, knowledge, production, and knowledge distribution as critical to gaining the advantages inherent in the access to sources of knowledge.

Methodology

Knowledge management, already being successfully used in some service and manufacturing firms, may hold the key for improving the process of expatriation for multinational corporations. The literature above identifies several issues related to management decisions about expatriate assignments, selection, training, support, and repatriation that are associated with the success/failure of the expatriate assignment. We will use the Palmer & Varner model to identify the types and detail of knowledge needed for decisions in the expatriation process. For each stage in the model, we will address the following questions:

What information/knowledge is needed?
Where does it reside?
How can the knowledge best be captured and institutionalized?
How can it be distributed most effectively to those who need it?

Application to Expatriation

While knowledge management related to the expatriation process could include gathering and disseminating data and knowledge at various levels in the organization, the majority of the potential gains would flow from the expatriates and those on short-term assignments into the system and upward through the decision making structure. They are the ones who have the first hand experience with the international environment.

Information about what knowledge, skills, and abilities are needed to perform effectively in different kinds of assignments at various sites resides in those who are currently or have been in those positions. Expatriates accumulate and absorb a wealth of data and information while on assignment. The organization needs to capture that information both during and after overseas assignments. The challenge comes in transforming the captured data, anecdotes, and information into knowledge that can be used to improve organizational decision making and outcomes.

Knowing about the successes, frustrations, challenges, and failures associated with the assignments can enable the organization to assess what preparation and support are needed to improve outcomes and to judge the effectiveness of the current levels of preparation and support. Capturing the organizational "stories" that illustrate successes and failures provides valuable information that can be used to design better training for future expatriates (in stage three of the model). For example, hearing about (and from) the plant manager sent to Senegal who was terribly frustrated by his inablility to meet production goals will be interesting to prospective expatriates. This information will become meaningful and useful when they know that even though technically possible, the goals were not achievable because workers return to their villages to provide support in times of family crises. This story, with the rationale, is much more likely to have an impact on prospective expatriates than a lecture on the need to consider cultural differences.

Expatriates can attest to the relative importance (or unimportance) of language skills and cultural understanding in various locations. This kind of information is also of great importance to organizational decision making at stage three of the model. Expatriates are also in a position to provide assessments of the level of organizational presence necessary to achieve organizational goals, information that is crucial to decisions at stage two in the model. Expatriates frequently have access to data about the threats and opportunities presented by the local environment (social, economic, political, and business) that could be critical in making decisions related to operationalizing the organization's position on the continuum in stage one.

Mechanisms to collect the kinds of data mentioned above need to be designed and made part of the organization's operating system. They can be as simple as asking expatriates questions (and recording the responses) at predetermined points in the expatriation process and making that data available to those who can make use of it within the organization. Establishing mentors for expatriates is another way to encourage information flow two ways within the organization. If expatriates become mentors to prospective and new expatriates after repatriation, their knowledge is more likely to be captured and used within the organization. It takes a corporate culture that supports a high level of employee trust to encourage the kinds of data and information sharing for the system to work effectively (see caveat). Otherwise expatriates may be unwilling to share anything but successes and might be unwilling to access information that might be useful to them for problem solving. For those organizations that are located on the right side of the continuum in stage one of the model, factoring international experience into career development may provide the level of understanding necessary to interpret the data from expatriates and incorporate it into more effective decisions at all stages in the model.

A Caveat

While this paper focuses on the potential gains to be realized from the application of knowledge management to expatriation, for this or any knowledge management process to work, there must be a system in place to support it. Such a system requires an information technology system plus an organizational infrastructure that supports the system, including a corporate culture and reward system that encourages the information flows essential to its success (Lank, 1997; Sarvary, 1999).

How this Research Contributes to New Knowledge

This paper provides a synthesis of knowledge management constructs and the expatriation process. Both of these areas are of great interest to researchers and managers. With the growing focus on globalization and heightened competitive pressure, businesses are aware of the need to improve efficiency within the expatriation process and for the organization as a whole. There is a body of research that focuses on each of these areas, but at this point, there has been no systematic interface that takes advantage of the potential synergy.

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Unemployment and Low-Literacy Among Welfare Recipients: Continuum of Literacy Program Models

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Given the recent federal and state legislative initiatives on welfare reform and workforce development, literacy practitioners are challenged to develop a continuum of programs that provide an appropriate mix of learning opportunities that can assist current and former welfare recipients to both acquire and maintain employment. A continuum of four types of programs is presented and these are matched with six possible employment tiers of current and former welfare recipients.

Keywords: Literacy, Welfare, Curriculum

Introduction

Federal policy initiatives on welfare reform and workforce development, that is, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, the Department of Labor's 1997 Welfare-to-Work program (WtW), and the Workforce Investment Act of 1998) have introduced major changes in the practice of both literacy education and human resource development (HRD). When these policies were initiated, most adult literacy programs targeted the development of learners via a traditional academic curriculum. This curriculum allowed low literate welfare recipients a long-term opportunity to complete a GED, high school diploma, or a competency diploma, but it has proved ineffective to quickly assist welfare recipients to obtain and maintain employment. However, as the reform measures have been implemented, they have not only impacted the extent to which low literate recipients will receive government support to attend literacy classes, they have subsequently caused differential effects in the programs themselves.

One of the most visible effects of the reform initiatives is in the patterns of enrollments. Examples of these effects include: declining enrollments from the number of clients placed into mandatory jobs; changes in the types of students likely to enroll, as learners with lower literacy skills are mandated to attend and those with higher skills are placed in jobs; students' motivations for enrolling due to an increase in mandatory vs. voluntary participation; changes in the amount of time, such as the number of hours per week, students have available for literacy study; changes in the time of day, that is day vs. evening hours, students are available to participate; and the potential loss of federal and state funding for literacy services that do not include a work orientation. These reforms target only one segment of the population--welfare students, as opposed to workers, family literacy students, incarcerated low literates, etc.--from which literacy programs draw their students. However, the nature and extent of the reforms are destined to usher in a new era of literacy programming as literacy practitioners and HRD Professionals contemplate the role of literacy in assisting welfare recipients to obtain employment and to advance in the workforce. This paper presents a framework of alternative literacy approaches that could assist practitioners to expand their programmatic offerings to meet a wider variety of needs among current and former welfare recipients. The following topics will be discussed: employment tiers and the literacy needs of recipients, continuum of literacy programs, synthesis of employment tiers with continuum of programs, and conclusion.

Employment Tiers and the Literacy Needs of Recipients

Federal and state legislative initiatives categorize recipients in accordance with their employment placement potential which roughly correlates with the level of literacy needs among current and former welfare recipients. Assuming that participants who lack prior work experience can benefit significantly from an experiential exposure to the world of work, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) identified both unpaid work experience and subsidized employment as acceptable means to meet the new federal work participation requirements for recipients with either little work experience or low basic skills. However, as the reform measures have been implemented, a continuum of both former and current recipients has emerged:

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Unsubsidized-Employed Workers, Subsidized-Employed Workers, Subsidized-Unemployed Recipients, and Unsubsidized-Unemployed (often homeless) individuals.

Unsubsidized-Employed Workers

These workers are considered "leavers" from the welfare rolls, i.e., they no longer receive cash payments from the government. Brauner and Loprest (1999) analyzed eleven leavers studies that were conducted by ten states. Only studies that clearly described their methodology and reported survey response rates of 50 percent or higher were included. They found that over half of the leavers worked 30 hours or more per week in jobs, such as restaurant/fast food, clerical, or retail sales and services. In general, they did not earn enough to raise their income far above the poverty level. Brauner and Loprest (1999) observed, for example, that in 1997 the poverty threshold for a three-person family with two dependent children was $12,931, the equivalent of full-time (35 hours per week), full-year employment earning $7.39 per hour. However, the average earnings for leavers was estimated to be between $10,000 to $12,000, less than the poverty level for a family of three. Also, over half of leavers' families were still covered by Medicaid, and some leavers continued to receive food stamps. Leavers also relied on various non-government sources of income support, such as family and friends. Although leavers will take time to make the adjustment to a more independent life-style, many of them can still benefit from literacy programs. For example, in Wisconsin, 77.6 percent of leavers did not complete high school (Wisconsin Works Education and Training Committee, 1998). Also, some states, such as Wisconsin, even provide state support for such individuals to return to literacy classes six to nine months after they have left the welfare program. The state will pay for fifty-percent of the child care costs associated with returning to school.

Subsidized Employed Recipients

These individuals experience employment which is usually structured to permit participants to work for private employers. These employers pay subsidized recipients regular wages which are financed out of diverted welfare funds. In the five states studied by Holcomb et al. (1998), that is Massachusetts, Virginia, Oregon, Indiana, and Wisconsin, subsidized employment programs were a seldom used option. However, Oregon has enjoyed considerable employer, legislative, and staff support for its "JOBS Plus" subsidized employment program. In the other states its use was usually limited to a few select areas where an arrangement had been worked out among a few employers. One major barrier to the development of such programs is the difficulty of finding an appropriate fit between the job needs of employers and the needs, interests, abilities, and skill levels of recipients. Also, if recipients have sufficient skills for subsidized employment, they are generally able to find unsubsidized employment. Therefore these individuals would not likely be placed in mandatory literacy training programs, and they appear to share the same literacy needs as unsubsidized employed workers.

Subsidized-Unemployed Recipients

These individuals represent two categories of recipients: those placed in unpaid Community Service Jobs (CSJs) and Transitional recipients.

Community Service Jobs. The unpaid work experiences for these individuals are often structured so that participants work for public and nonprofit employers in exchange for welfare benefits. There is no financial exchange of work for benefits. Holcomb et al. (1998) found that in all five of the states they studied telling recipients that they would be placed in an unpaid work experience position served as a negative incentive to motivate recipients to seek and obtain unsubsidized employment. Although sparingly used because of the administrative and operational challenges associated with operating such programs, especially during periods of strong economic growth and plentiful entry level jobs, Holcomb et al. (1998) observed that the community service providers found the experience with such workers mutually beneficial and were willing to assist participants to succeed in their assignments. However, recipients generally cut their assignments short and rarely remained in a position beyond one or two months. If these efforts failed to result in unsubsidized employment, then these individuals would be strong candidates for mandatory participation in literacy programs to assist their efforts.

Transitional Recipients. These recipients are considered the harder-to-serve individuals who will not qualify for unsubsidized employment without other support services, such as mental health, substance abuse or vocational rehabilitation services, and others. These individuals experience particularly severe personal or family problems, such as substance abuse, a health limitation, depression, or have a child with a chronic medical condition or serious disability. Therefore, more intensive and effective strategies are required to address their needs. Holcomb et al. (1998) identified several steps taken by Oregon to address this population. However, in addition to their other characteristics, these individuals may also experience mild to severe learning disabilities and thereby require specialized literacy education programming to address their learning needs.

Unsubsidized-Unemployed Individuals

These individuals represent a category of former recipients who left the welfare rolls because they were either cut off as a result of sanctioning or left welfare voluntarily. While none of the studies reviewed indicated how many individuals/families left welfare because of sanctioning, Brauner and Loprest (1999) found that sanctioned leavers had a lower employment rate when compared to non-sanctioned leavers. The employment rate ranged from 39 percent in Tennessee to 53 percent in Michigan and Iowa. Also, in a survey of 62 homeless families residing in a homeless shelter in Milwaukee, Wisconsin, 32 percent indicated that they had been sanctioned at some time since the introduction of welfare reform (Center for Self-Sufficiency, 1999). However, eleven of the twenty sanctioned respondents indicated that their current spell of homelessness was unrelated to the sanctioning.

Given the range of welfare-related low literate learners identified above, traditional academic literacy programs will be hard-pressed to continue to meet their learning needs in the normal way. Successful pre-employment and employment-based educational programs must be designed to work in concert with the providers of other social services and they should include short-term programs that target the specific needs of these learners. Therefore, adult literacy providers must become more creative in their efforts to deliver educational programs that meet the learning needs of current and former low-literate welfare recipients.

Continuum of Literacy Programs

The challenge now is for literacy practitioners to develop a continuum of programs that provide an appropriate mix of literacy programs with varying degrees, that is broad vs. narrow, of context and skills (see Table 1) that can assist current and former recipients to both acquire and maintain employment. In addition to academic programs, three other approaches are currently being considered and/or implemented in efforts to improve literacy instruction, knowledge retention, and students' motivation: situated context/cognition, integrated literacy-soft skills, and integrated literacy-occupational skills programs (Cohen, 1994). This transition from the more traditional "academic" approach represents a significant change not only in the philosophical orientation to teaching literacy skills, but in the entire scope of designing, implementing, and evaluating the literacy effort. This section discusses four types of programs that could constitute the mix of program alternatives available to literacy practitioners.

Table 1
Mix of Literacy Programs Targeting Welfare Recipients

	Broad Context	Narrow Context
Broad Skills	*Academic Programs*, e.g., Basic Skills, GED, competency based, etc.	*Integrated Literacy With Occupational Skills Training*, e.g., welding, machine operation, Certified Nursing Assistant, etc.
Narrow Skills	*Integrated Literacy with Soft-Skills and Life-Skills Training*, e.g., Job Readiness, Family Literacy, etc.	*Situated Context/Cognition*, e.g., Workplace Programs

Academic Approach

The academic approach is the dominant form of adult literacy education. It focuses on the development of a broad base of academic knowledge and skills, such as the ability to read, write, and perform arithmetic operations, that are generalizable to a variety of contexts. It places a premium on "symbol manipulation" where the learner is encouraged to master symbolic rules of various kinds, such as phonics, and mathematical formulas (Resnick, 1987). Based upon the general curriculum of high school, the instructional objectives, course materials, and class instruction of academic literacy programs are organized around the identification, manipulation, and mastery of laws, symbols, such as letters, words, numbers, formulas, and others, and well-defined problems that are abstractions from contextual situations. In addition, academic programs also value the learner's ability to think independently, that is without the aid of physical and cognitive tools, such as notes, calculators, etc., (Resnick, 1987). Therefore, recipients placed in academic programs, would be taught symbol manipulation and independent thinking skills via a focus on coding and decoding of abstract concepts, for example the solving of word problems in preparation for the GED test.

The planning of academic programs is often conducted by literacy administrators in conjunction with literacy instructors and guided by the curriculum of K-12 schools (Mezirow, 1996). In this view, students learn best in classroom situations via discussion topics, drill and practice exercises conducted in individualized (and small group) sessions with the aid of teacher-made materials, workbook exercises, preplanned goals and objectives, and computer programs (Dirkx and Prenger, 1994). The programs are offered in a wide variety of settings, including high schools, community colleges, community buildings/organizations, homes, and others. Instructors are usually current or former K-12 school teachers employed to deliver the literacy program on a part-time basis. The time-commitment for students range from one week to over three years. At the completion of the program students receive a certificate, such as the GED, High School Diploma, or other credential.

However, there is mounting evidence that academic programs may be inappropriate for those welfare recipients who have the lowest levels of literacy skills. In a study conducted prior to the welfare reform initiatives, Friedlander and Martinson (1996) found that the impacts on receipt of a GED or high school diploma were concentrated among those members of the sample who possessed higher initial literacy levels. The findings suggest that those welfare recipients with lower literacy skills should be exposed to alternative program approaches whereas those with higher skills could be strong candidates for traditional academic literacy programming.

Situated Context/Cognition

The situated context/cognition approach is comprised of an array of curriculum approaches that range from context-based programs to situated-cognition programs. The literature on workplace literacy abounds with examples and models of context-based programs that do not seek to assist learners to generalize beyond the specific context in which the knowledge was taught. Therefore, in the interest of expanding the theoretical options available to practitioners, this section will discuss situated-cognition programs. Although no models or examples were found in either the adult education or training and development literature, these programs would theoretically provide a systematic approach to assist learners to progressively develop their thinking from familiar context-specific knowledge applications, such as a particular job or workplace, to embrace more highly abstract and generalized knowledge applications consistent with the goals of the academic approach.

The situated-cognition approach has gained increasing attention in the K-12 literature as scholars have observed differences in how out-of-school learners, that is every day people and practitioners, and school students reason when they are presented with complex, ill-defined problems. The studies analyzed by Cobb and Bowers (1999) found that different forms of reasoning tended to arise in the context of different practices that involved the use of situation specific tools and are organized around different overall motives. For example, when presented with a "reading" problem, school students would tend to view the problem of learning to read as an end in itself. However, a worker would view reading as an important job skill that is critical to economic survival.

These scholars have observed that the academic approach to teaching and learning artificially separates what is learned from how it is learned and used. They argue that the activity in which knowledge is developed and deployed is not separable from or ancillary to learning and cognition. Rather, the situations in which learning occurs co-produce knowledge through activity (Brown, et al. 1989). Learning is thereby viewed as an activity that is situated with regard to an individual's position in the world of social affairs in non-school settings (Cobb and Bowers, 1999). Brown et al. (1989) identified two assumptions that are central to understanding situated knowledge and learning. The first pertains to both learning and tools. Learning how to use tools involves far more than can be accounted for in any set of explicit rules. The occasions and conditions for use arise directly out of the context of activities of each community that uses the tool, framed by the way members of that community see the world. For example, a pair of scissors are indispensable for both barbers and sempstresses, yet each practitioner community has its own rules for the correct utilization of scissors and their role in the work process. For novices of each community, learning and acting are therefore indistinct. Learning is a continuous, lifelong process resulting from acting in situations. In this way, people who use tools build an increasingly rich implicit understanding of the world and of the tools themselves. The second involves learning and enculturation. Enculturation characterizes the process people engage in when they learn to speak, read and write, or become an employee for a specific job. When given the chance to observe and practice, in a particular context, the behavior of members of a culture, people quickly learn the relevant jargon, imitate the behavior, and gradually start to act in accordance with cultural/group norms which can be extremely complex.

Four arguments are advanced in the literature that suggest education and learning programs for welfare recipients should be situated in context specific environments. First, there is a significant difference between "authentic activity," that is the ordinary practices of a given organizational or group culture, and school activity (Brown et al., 1989). The meaning and purpose of domain specific activities are socially constructed through negotiations among present and past members of a community; therefore, activities which are coherent, meaningful and purposeful to members of this community and culture are authentic. School activity, such as classroom tasks, occur in a schooling culture where successful learning often has little bearing on performance elsewhere. Therefore, such activity is inauthentic and thus does not constitute fully productive learning experiences for individuals who do not have prior mental models of specific work environments.

Second, knowledge is "constructed" and it does not transfer between tasks. Much of what a student learns is specific to the situation in which the learning occurs. Too often there is a mismatch between typical school (or academic) learning situations and "real world" situations, such as the workplace, where learners are expected to display their knowledge (Anderson et al., 1996). For example, the lack of transfer of abstract knowledge taught in isolation from the contexts in which the knowledge will be used suggests that literacy students might perform well in academic English classes, however, they may struggle with the written and spoken forms of English encountered in a particular workplace. Therefore, to be truly skillful in a functional context, learners must develop situation-specific forms of competence. In addition, learners taught via situated cognition would be encouraged to constantly test their knowledge against what they observe (Palincsar, 1989).

Third, learning is inherently a socially shared phenomenon (Resnick, 1987), which occurs in complex social situations, such as work or family. This perspective recognizes that in out-of-school learning situations most mental activities are explored through the use of such knowledge tools as calculators, templates, procedural rules, and others, and knowledge sources, such as other role players in the situation. Therefore, literacy learners should be allowed to utilize the knowledge tools and sources found in typical (or targeted) work environments, and they should be required to display their skills in complex workplace situations. In addition, students learn new materials more efficiently as they use the knowledge of their contextual situations and the knowledge tools and sources of these situations to develop their literacy skills. In this way, education is made more meaningful as this approach elicits greater participation and commitment from learners who need to see the relevance of their learning activities (Keeley, 1991).

Fourth, action is situationally grounded; the potentialities for action cannot be fully prescribed independently of the specific situation (Resnick, 1987). For example, the preparation of an individual for a position as a Nurses Aid cannot be complete with only an abstract discussion of the job context. The individual would need to be exposed to the language and organizational culture of the employment setting, the roles and functions of the people, such as patients, nurses, supervisors, with whom the Nurses Aid interacts, and the job-related terms and situations with which the Nurses Aid contends on a daily basis.

A primary method of teaching via the situated cognition approach is via a *cognitive apprenticeship* (Brown, et al. 1989). This method supports learning in a domain by enabling students to acquire, develop, and use cognitive tools in authentic domain activity. It suggests situated modeling, coaching, and fading whereby teachers or coaches promote learning, first by making explicit their tacit knowledge or by modeling their strategies for students in authentic activity. Then teachers and student-colleagues support students' attempts at doing the task. And finally they empower the students to continue independently, that is by fading. (See Brown et al. (1989) for further details of this method.)

Another important feature of cognitive apprenticeship is its emphasis on collaborative group learning experiences. This process seeks to enculturate learners through social interaction and the circulation of narrative through the conversations of groups of practitioners (Brown, et al., 1989). It is characterized by: a) collective (group) problem solving; b) displaying, reflecting on, and discussing the multiple roles required for carrying out any cognitive task; c) confronting and discussing ineffective strategies and misconceptions; and d) providing collaborative work skills.

Situated cognition programs theoretically hold great promise as an alternative to the traditional academic approach. Short-term, career focused job skill training can be provided via such situated programs to either subsidized or unsubsidized recipients who are either employed or unemployed. Literacy and HRD providers can work directly with employers to develop on-site training opportunities.

Integrated Programs

Critics of the situated cognition approach, (Resnick, 1987; and Anderson, et al., 1996.) argue that situation-specific learning alone is very limiting, as when familiar aspects of a task change in certain ways unschooled individuals experience considerable difficulty and may fail entirely. They suggest that the extent to which learning should be bound to a particular situational context depends upon the kind of knowledge being acquired. In some cases knowledge can be bound to a specific context by the nature of instruction, for example a process demonstration of word processing skills. In other cases, the extent of contextualization depends on the way the material is studied, such as hands-on problem solving (Resnick, 1987). Therefore, they argue that the integrated approach should embrace elements of both the academic and situated approaches. In the context of literacy programming, it seeks to assist learners to develop a narrow base of skills, for example job search skills, that are generalizable to a broad base of contextual situations, or to develop a broad base of skills, for example traditional academic skills, that are applicable to a specific contextual situation, such as a particular job. Integrated programs attempt to integrate basic skills (academic) preparation with functionally meaningful content. The following arguments suggest that this approach can be viable for the preparation of low literate welfare recipients.

First, the amount of knowledge transfer and the degree to which that transfer is positive depends upon the learning experiences to which the learner is exposed and the relation of the material that is originally learned to the transfer material (Anderson, et al. 1996). Therefore, learners can be trained in classroom situations, such as mastering word processing and other computer-related skills. Those skills will transfer to a variety of employment settings so long as the content is highly related to the knowledge/skill requirements of the applied context. In this view, representativeness and degree of practice are major determinants of transfer from one task to another and from one context to another.

Second, learning transfer varies directly with the number of symbolic (abstract) components that are shared in specific situations (Anderson et al., 1996). The amount of transfer depends on where attention is directed either during the learning program or at the point of transfer. In preparing welfare recipients for success in the workplace, these observations suggest training on the cues that signal the relevance of a job-related skill should probably receive more emphasis in instruction than it typically receives in purely academic programs. A strategy of abstract instruction combined with concrete examples can be a powerful instructional method (Anderson et al. 1996). This method is especially important when the knowledge gained from literacy programs must be applied to a wide variety of frequently unpredictable future tasks.

Third, observing that fewer cognitive resources are required for the actual performance of tasks, and that the capacity for learning is increased when large tasks are separated into smaller elements, supporters of the integrated approach argue that it is better to train independent parts of a task separately (Anderson et al. 1996). Therefore, some of the skills required for context-specific jobs should be separated from the larger task requirements and provided in a classroom setting(Anderson et al. 1996).

Two types of integrated programs are now being developed and implemented to assist current and former recipients: integrated literacy/occupational skills programs and integrated literacy/soft skills training.

Integrated Literacy/Occupational Skills Programs. Typically located in Job Centers, community agencies, and literacy centers, integrated literacy/occupational skills programs attempt to closely simulate the targeted job setting and integrate basic skills education with job skills training. Occupations are targeted that have a demonstrated lack of workers and only twelve to twenty clients are allowed to participate in each program. The programs range from several days to twenty weeks in duration. They are typically designed by administrators in negotiated arrangements with potential employers, social services representatives and other payers, curriculum planners, and other stakeholders.

Integrated Literacy/Soft Skills Training. These programs tend to focus on a narrow set of social and organizational skills which can be applied to a much broader context. The literacy skills required to perform the targeted activities and functions can be taught conterminously with the training efforts designed to assist participants to acquire and develop the required skills. Programs have been developed (or they are being considered for development) on several important topics. For example, the Wisconsin Works Education and Training Committee (1998) recommended several types of training: 1) job seeking skills training to assist with the creation, preparation, development, and updating of resumes; the completion of job applications; and the development of networking skills. 2) Job survival/retention training to assist participants to understand the rules and expectations of employers, qualities that employers desire in an employee, the importance of punctuality, the ability to follow directions, the meaning of teamwork in the workplace etc. 3) Life skills training to enable a parent(s) to participate more fully in the workforce via an enhanced understanding and acceptance of parental responsibilities through strengthening parenting skills, managing family budgets, managing anger, developing interpersonal skills, improving problem solving and decision-making skills, improving time management skills, and others. 4) Motivational training to assist participants to overcome a poor self-image by assisting them to identify their employment-related strengths, setting long-term and short-term life and employment goals, creating an environment of encouragement and support, and providing mentoring experiences.

Synthesis of Employment Tiers With Continuum of Programs

In this new era of literacy programming, adult literacy and HRD professionals are presented with an unprecedented opportunity to experiment with a number of different approaches to literacy programming. Undoubtedly, some programs are more responsive to the needs of some welfare-related literacy learners while other programs are more appropriate for other learners. Table 2 provides an organizing framework for determining when narrower or broader contexts are required and when attention to narrower or broader skills are optimal for effective and efficient learning among the five types of welfare-related learners.

Table 2
Employment Tiers and Learners Matched With Program Types

Employment Tiers and Types of Learners	Academic	Situated Cognition	Integrated Soft-Skills	Integrated Occupational-Skills
Unsubsidized Employed	Y	Y	?	?
Subsidized Employed	Y	Y	?	Y
Subsidized Unemployed (CSJs)	?	?	Y	Y
Subsidized Unemployed (Transitions)	?	?	Y	Y
Unsubsidized Unemployed (Homeless)	?	?	Y	Y

Y = Yes. Should be a good match between the majority of learners and type of program.
? = Questionable. May not be a good fit between most learners and type of program.

Although the literature is inconclusive regarding the most effective matches of curriculum approaches with category of current and former welfare recipients, it strongly suggested that academic programs tend to be successful with students who have experienced previous academic success. Given that other research has demonstrated a strong correlation between high academic achievement and employment, it is apparent that these programs could provide a significant means for both Subsidized and Unsubsidized Employed Workers to complete a secondary diploma or certification program. Such a credential could provide opportunities for both post secondary education and career development. Also, some recipients in other tiers may also be close to finishing high school or possess other characteristics to suggest they should also pursue academic programs. This option should remain open to such individuals. Additionally the situated cognition programs are untested with adult literacy students, but given their emphasis on the contextual environment, they may be most appropriate either for learners within employment settings, or CSJs.

This program format also suggests that academic programs will be inappropriate (as currently designed and implemented) to serve the short-term literacy and employment needs of those current and former recipients with lower literacy skills. These learners will require different (more innovative) approaches to literacy instruction. Both situated cognition and integrated programs seem to be appropriate for such learners, that is given their low literacy skills and their low level of previous work experience. Therefore, such programs could offer acceptable options for CSJs, Transitional, and Homeless learners.

Conclusion

A literacy provider system that promotes a continuum of programmatic options for current and former welfare recipients requires a range of agency/organizational cooperative and collaborative relationships among adult literacy and HRD providers. In such a system, students should experience a seamless transition in their educational preparation as they move from unemployment to employment and from general academic knowledge to job-specific/context-based training. For example, academic programs can assist learners to obtain their academic credentials in order to pursue postsecondary opportunities, and to certify their knowledge attainment. Programs originating from the integrated approach can utilize the skills and abilities of both literacy specialists and occupational skills and related skills specialists to design short term integrated learning experiences that teach recipients literacy skills that are related to broad based social and organizational skills which are applicable to both a job-related occupation (and or occupational area) and soft-skills. Once they are either employed or engaged in employment-related training, HRD professionals can utilize the situated cognition approach to provide both current and former recipients with narrow, job-related, context-specific instruction regarding their employment responsibilities, team work, workplace norms, and others.

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The Relationship Between Learning Transfer System Perceptions and Basic Workplace Skills

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Research examining the relationship between workplace literacy and training-related factors is virtually nonexistent. This study examined variation in individual level learning transfer system perceptions associated with job-related basic skill differences. Results indicated significant differences in learning transfer system perceptions for employees that had the math and reading skill levels required for their jobs versus those that did not. Findings suggest a complex and little understood relationship between basic skills and learning transfer system perceptions.

Keywords: Learning Transfer, Basic Skills, Workplace Literacy

Workplace literacy refers to the ability of individuals to effectively respond to the literacy demands of the workplace (Gowen, 1992). Workplace literacy skills are the basic skills needed by employees to successfully perform job duties, learn, and apply learning on the job. These include skills such as reading, writing, mathematics, and listening (Department of Labor, 1991). For a number of reasons, the concept of workplace literacy has occupied a place of national and international prominence since the 1980's. For example, workplace literacy levels have been linked to national wealth (e.g., Berryman, 1994; Reich, 1992). Research has also shown that employees with more education earn more (e.g., Altonji, 1992; Levy & Murnane, 1992), that rates of innovation are higher in industries with more educated workers (Bartel & Lichtenberg, 1987), and that firms which invest more in learning experience more innovation (Cohen & Levinthal, 1990), suggesting high levels of workplace literacy may also enhance organizational performance.

In addition, research indicates that workplace literacy skills are so low that they pose a substantial threat to the economic well being of organizations. It is estimated that 10% of American workers are either functionally illiterate or marginally literate (Lund & McGuire, 1990); one in five lack the literacy skills needed to function effectively in work or life (Knell, 1990); and nearly half of all Americans have literacy levels well below what is needed to be competitive in today's economy (National Education Goals Panel, 1994). Workplace literacy levels such as this, when considered in the context of an increasingly competitive global economy, rapid technological change, organizational dynamics (e.g., restructuring, movement to team-based work), and structural changes in the economy (e.g., shift from manufacturing to a service-orientation), have the potential to severely undermine the adaptive capabilities of organizations (National Center on Education and the Economy, 1990; Cappelli & Rogovsky, 1994; Carnevale, Gainer, & Meltzer, 1990).

Given this concern, it is surprising to find that very little direct empirical research has examined the relationship between workplace literacy skills and employee ability to improve performance through learning. From a broad perspective, addressing this question is important because learning is a major means organizations use to improve performance. For example, rising levels of investment in training - estimated at over $60 billion in 1998 (Lakewood Research, 1998) - and increasing concern with concepts such as continuous learning, lifelong learning, the learning organization, and organizational learning – all reflect intensifying organizational commitment to learning as an adaptive, performance improvement strategy.

Baldwin and Ford (1988) pointed to three general foci for transfer interventions; (1) the learners, (2) the learning design, and (3) the organizational context. Basic work skills have not previously been examined as a learner characteristic that might influence trainee's interpretation of the learning transfer system. Understanding the relationship between workplace literacy skills, learning, and learning transfer could help HRD researchers and practitioners develop strategies that organizations facing literacy challenges could use to enhance the pay-off from learning and training. For instance, research may point to the value of profiling jobs, testing, and, where necessary, enhancing the workplace literacy skills of workers prior to investing in other job-related training. Workplace literacy skills may also play a role in employees' decision to participate in training. It is possible, for instance, those employees unable to read at levels required by their jobs may purposefully avoid training as a strategy to conceal

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this weakness. Workplace literacy levels may also be associated with individual readiness to learn in training, expectations about training and its performance improvement value, confidence and ability to apply new learning on the job, perceptions of organizational support for learning, learning transfer, or perceptions about the appropriateness of training design.

Mental ability has been shown to be a predictor of success in training (Ferris, Bergin, & Gilmore, 1986) suggesting employees' literacy level may also influence an individual's capacity to develop and improve performance through learning. At least one study of workplace literacy supports this view. In this study, a large paper-manufacturing firm undertook to determine why a maintenance training program for 1,800 hourly employees was ineffective. Although trainees reported they understood training content at the conclusion of training, when they returned to their jobs they couldn't perform the maintenance tasks for which they had been trained. Further investigation revealed the individuals had difficulty reading, understanding, and, consequently, applying the information contained in training. The conclusion: poor reading skills impaired learning and subsequent job performance (Davis, 1997).

The goal of this exploratory study is to begin to examine the relationship between workers' perceptions of learning transfer variables and job-specific workplace literacy skills. Specifically, the research question posed by this study was:

> *Research Question: Will employees who have the required levels of job-related basic skills and those who do not differ in their perceptions of learning transfer system factors?*

Method

Sample Participants in this study were 1079 individuals employed with a state Department of Transportation in the southern US. This included 319 Mobile Equipment Operators, 178 Highway Foreman, 481 Engineering Technicians and Engineering Tech Supervisors, and 77 Highway Maintenance personnel (Specialists and Superintendents). Subjects in each job category were either chosen at random from a larger population of individuals in that job category or represent the total population for that job category in this organization. Participants were required to attend the data collection sessions but could decline to complete the instruments if they so desired. Of the 1218 individuals selected to participate in the assessment, 1079 (88.5%) completed the instruments.

Procedure The data in this study were collected as part of a needs assessment project conducted to address a number of organizational issues including workplace literacy and training transfer problems. The workplace literacy assessment instruments and the Learning Transfer Systems Inventory (LTSI) (Holton, Bates, Seyler, & Carvalho, 1997) were administered under the guidance of a Needs Assessment Team, led by the researchers, with the assistance of the organization's District Training Specialists. On-site District Training Specialists administered the assessment instruments during the months of January and February 1999.

Independent Variable Measures Data on employee basic skill levels were assessed using two scales from the Work Keys® assessment system. Work Keys is a set of eight criterion-referenced basic skills assessment tests based on the SCANS model. The tests measure an individual's cognitive and interpersonal skills against the proficiency required to successfully perform a specific job. Required proficiency levels are established by profiling specific jobs across the eight skills assessed by the Work Keys® system. Work Keys measures work-related rather than academic proficiencies.

Two Work Keys skills were assessed in this study. The *reading for information* assessment measured an individual's skill in reading and understanding work-related instructions and policies. Employees were tested on their ability to understand reading passages, based on actual demands of the workplace, that were in the form of memos, bulletins, notices, letters, policy manuals, and governmental regulations. The *applied mathematics* assessment measured an individual's skill in applying mathematical reasoning to work-related problems. The assessment required the examinee to set up and solve the types of problems and to do the types of calculations that actually occurred in his/her job. Examinees could use a calculator. A formula sheet was provided that included, but was not limited to, all required formulas. For each assessment, examinees were given 40 minutes to solve 30 multiple-choice problems.

Proficiency levels for these assessments were based on jobs previously profiled by Work Keys that were functionally similar to the jobs examined in this study. To determine if employees who had and did not have the required levels of basic skills for their jobs differed in their perceptions of learning transfer system factors, individual scores for both assessments were dummy coded based on whether the individual met or did not meet the required proficiency level for his/her job. These variables (pass math, pass read, pass both) were used as the grouping factors in the analyses. The job groups and the proficiency levels required for each are shown in Table 1.

Table 1: Required Math and Reading Levels by Job Group

	Job Group				
	1 Mobile Equip Ops	2 Hiway Foreman	3 Hiway Main Sup	4 Eng Tech (entry)	5 Eng Tech (adv)
Req'd Math Level	3	4	5	5	5
Req'd Read Level	4	4	4	5	6

Dependent Variable Measures Learning transfer system variables were assessed using the Learning Transfer Systems Inventory (LTSI). The LTSI (Holton, Bates, & Ruona, in press), formerly known as the LTQ, measures 16 factors in the learning transfer system which may be barriers or facilitators to learning transfer. The instrument has shown initial evidence of construct and criterion validity (Bates & Holton, 1999; Bates, Holton, Seyler, & Carvalho, in press; Ruona, Holton, Bates, Leimbach, 1999; Seyler, Holton, Bates, Burnett, & Carvalho, 1998). The LTSI is divided into two sections representing two construct domains. For the abbreviated form of the instrument used in this study, the first section contained 46 items measuring 11 constructs representing factors affecting a specific training program. The instructions for this section directed respondents to "think about this specific training program." Constructs included learner readiness, motivation to transfer, positive personal outcomes, negative personal outcomes, personal capacity for transfer, peer support, supervisor support, supervisor sanctions, perceived content validity, transfer design, opportunity to use.

The second section contained another 23 items measuring five constructs. These constructs represent more general factors that may influence any training program conducted. For these items, trainees were instructed to "think about training in general in your organization". Constructs in the second section included transfer effort-performance, performance-outcomes, openness to change, performance self-efficacy, and performance coaching.

Items were designed to measure individual perceptions of constructs, including individual perceptions of climate variables in some cases. Although climate is often used to refer to group-level shared interpretation of organizations, climate can also be an individual level construct, often referred to as psychological climate. James and MacIntyre (1996) noted that it is important to study climate from the individual perspective because people perceive particular climates differently and respond in terms of how they perceive them. Because transfer of learning refers to individual behaviors resulting from learning, it is most appropriate to assess individual perceptions of transfer climate because it is those perceptions that will shape the individual's behavior.

Covariate Measure Employee beliefs about the extent to which an organization values learning and skill acquisition may affect training-related behaviors and attitudes (Kozlowski & Hults, 1987; Noe & Wilk, 1993), including learning transfer system perceptions. To control for this continuous learning culture (Tracey, Tannenbaum, & Kavanaugh, 1995), a construct that assesses the extent to which individuals perceive an organization's culture to be supportive of learning, was added as a covariate. The Tracey et al. (1995) scale was used to assess this factor. It is comprised of 15 items.

Analysis The intent of this study was to examine variation in individual level learning transfer factor perceptions associated with job-related basic skill differences. Two different multivariate analyses of covariance (MANCOVA) were conducted to determine whether individuals who had and did not have required levels of basic skills differed in their perceptions of learning transfer factors. By providing a single test of group differences across all dependent variables, MANCOVA also provides control over the experiment-wide error rate inherent in separate univariate tests. First, a two-way MANCOVA was conducted using "pass math" and "pass read" as the factors. This analysis allowed the interaction between the two factors to be assessed as well as the main effects. Second, a one-way MANCOVA was conducted with "pass both" as the independent variable. This analysis lumped together in one group respondents who passed neither exam or only one exam to compare their perceptions with those who passed both exams. Where significant multivariate effects were found, post-hoc univariate ANOVAs were conducted to determine which dependent variables were different across the groups (Hair, Anderson, Tatham, & Black, 1998).

Results

Table 2 shows means and standard deviations of LTSI variables as a function of test scores for math and reading at or above the required job level (pass) and below the required job level (fail). Also shown are test scores at or above the required level for math and reading together (pass both) and below the required level on one or both (fail 1 or 2). Intercorrelations among the dependent variables and between the dependent variables and the covariate are shown in Table 3. Since the dependent variables are all measures of learning transfer system factors, the significant and often substantial intercorrelations is not surprising.

Table 2: Means and Standard Deviations of LTSI Variables as a Function of Basic Skill Test Scores

	CCult		CVal		LReady		Mtran		OChng		OppUse		Peer		PCoach		PerfSE	
Group	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Pass math	3.42	.62	3.20	.85	3.53	.62	3.68	.65	3.28	.64	3.28	.65	3.48	.68	3.35	.65	3.80	.56
Fail math	3.54	.59	3.43	.77	3.53	.59	3.78	.64	3.16	.61	3.25	.58	3.41	.71	3.36	.65	3.85	.59
Pass read	3.45	.61	3.19	.87	3.52	.62	3.69	.66	3.31	.64	3.28	.64	3.49	.67	3.32	.64	3.80	.56
Fail read	3.49	.60	3.46	.72	3.54	.59	3.76	.64	3.12	.60	3.25	.58	3.40	.72	3.36	.66	3.84	.59
Pass both	3.42	.63	3.17	.87	3.52	.63	3.67	.66	3.30	.64	3.28	.65	3.48	.68	3.31	.66	3.79	.57
Fail 1 or 2	3.53	.58	3.43	.75	3.54	.58	3.78	.63	3.16	.61	3.26	.59	3.43	.70	3.38	.64	3.85	.58

Table 2 (con't)

	PCap		POE		PoNeg		PoPos		SSanc		SSprt		TEPE		TDsgn	
Group	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Pass math	2.98	.66	2.93	.83	3.08	.70	2.89	.87	2.47	.61	3.23	.91	3.75	.59	3.46	.84
Fail math	3.02	.53	3.08	.75	3.24	.67	3.02	.83	2.83	.74	3.32	.89	3.78	.62	3.68	.67
Pass read	2.99	.66	2.97	.82	3.07	.70	2.90	.87	2.46	.60	3.23	.91	3.77	.59	3.47	.85
Fail read	2.99	.52	3.02	.78	3.26	.66	3.01	.83	2.85	.74	3.33	.88	3.77	.63	3.66	.65
Pass both	2.98	.68	2.94	.83	3.06	.71	2.89	.88	2.43	.59	3.21	.92	3.75	.59	3.43	.87
Fail 1 or 2	3.00	.52	3.05	.77	3.24	.65	3.00	.82	2.82	.73	3.34	.88	3.77	.62	3.68	.65

Table 3: Correlation Coefficients for Relations Among 16 LTSI Scales and Continuous Learning Culture

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1CCult	**91**																
2CVal	47*	**89**															
3LReady	29*	36*	**70**														
4MTran	43*	57*	38*	**81**													
5OChgn	54*	26*	13*	20*	**76**												
6OppUse	45*	52*	30*	37*	35*	**69**											
7Peer	66*	45*	23*	42*	42*	40*	**81**										
8PCoach	62*	37*	22*	37*	33*	29*	47*	**70**									
9PerfSE	38*	37*	31*	38*	20*	27*	35*	38*	**80**								
10Pcap	53*	39*	21*	29*	32*	46*	32*	20*	25*	**52**							
11POE	64*	52*	24*	48*	39*	46*	47*	50*	29*	35*	**80**						
12PoNeg	31*	37*	19*	19*	18*	20*	34*	30*	21*	19*	29*	**68**					
13PoPos	40*	38*	24*	37*	25*	30*	37*	36*	24*	28*	51*	44*	**62**				
14Ssanc	-17*	-10*	-05	-09*	-31*	-19*	-14*	-05	-09*	-20*	-16*	-04	-05	**62**			
15SSprt	67*	38*	25*	35*	43*	36*	51*	58*	26*	36*	54*	31*	34*	-18*	**93**		
16TEPE	50*	56*	33*	61*	23*	43*	46*	43*	49*	33*	56*	24*	35*	-11*	38*	**81**	
17TDsgn	45*	69*	43*	56*	24*	44*	44*	41*	42*	34*	46*	25*	32*	-06	38*	55*	**89**

Note. Leading decimals omitted. Coefficient alphas are presented in boldface along the diagonal.
*p ≤ .05

The results of the multivariate and univariate ANOVAs are shown in Table 4. The top part of the table shows the results for the two-way MANCOVA, while the bottom part of the table (below the dashed line) shows the MANCOVA results for the one-way analysis using "pass both" as the between groups factor.

For the first analysis (two factors, "pass read" and "pass math"), the table shows that the multivariate test of the interaction effect (PM x PR) was not significant (F = .49). This means that the differences across the dependent variables for the individuals who did/did not meet the required math levels are roughly similar to those for individuals who did/did not meet the required reading level. The absence of a significant interaction effect indicates the main effects for reading and math can be interpreted directly. The main effects for both math and reading were significant (F = 2.10 & 2.02 respectively, p ≤ .05). These results indicate that there is a significance difference across the dependent variables between individuals who met the required math levels and those that did not as well as significant differences between individuals who met the required reading levels and those that did not.

Univariate tests show that those passing math differed in their perceptions on four learning transfer measures: openness to change, peer support, performance coaching and supervisor sanctions. In three of the four, those who failed math had poorer perceptions than those who passed math. Perceptions of performance coaching, however, were slightly higher for those who failed (M = 3.36 vs 3.35). For the reading test, perceptions also differed on four measures: content validity, performance coaching, personal outcomes negative, and supervisor sanctions. Those who failed the reading test perceived greater levels of all four of these measures. However, two of these measures are negative indicators of a supportive transfer climate. First, individuals that did not meet required reading levels perceived a greater likelihood that negative personal outcomes would accrue to them from the application of training. Second, results also indicated that fail read individuals perceived greater levels of negative responses from supervisors and managers (supervisor sanctions) when applying learning from training.

The next analysis was more restrictive. The independent measure (pass both) lumped together all individuals that failed one or two tests and compared them with those who passed both tests. A MANCOVA was conducted with continuous learning culture as the covariate. The main effect for "pass both" was significant ($F = 7.12$, $p \leq .01$). Univariate tests showed that persons who passed both tests had significantly different perceptions on all learning transfer system variables. Interestingly, their perceptions were rated lower on all variables except for openness to change, opportunity to use and peer support.

Table 4: Multivariate Analysis of Covariance and Univariate Analyses of Variance for Basic Skills Tests

	Multivariate		Univariate[b]							
Source	df	F[a]	CVal	LReady	MTran	OChng	OppUse	Peer	PCoach	PerfSE
Cont Lrng Cult	16	72.74*	--	--	--	--	--	--	--	--
Pass Math (PM)	16	2.10*	01	.21	19	4.21*	1.52	8.32*	5.77*	.03
Pass Read (PR)	16	2.02*	8.21*	.02	1.01	2.90	01	39	4.03*	.18
PM x PR	16	49	.00	.16	.00	01	42	.01	.06	.01
Cont Lrng Cult	16	72.37*	--	--	--	--	--	--	--	--
Pass Both[c]	16	7.12*	90.72*	22.17*	67.15*	132.80*	61.70*	156.70*	174.04*	40.96*

Note: Multivariate F ratios were generated from Pillai's criterion. Wilks lambda, Hotellings trace, and Roy's gcr were also significant.
[a] Multivariate df = 16, 539. [b] Univariate df = 1, 554
[c] Multivariate df = 16, 541 Univariate df = 1, 556
*$p \leq .05$

Table 4 (con't)

	Multivariate		Univariate[b]							
Source	df	F[a]	PCap	POE	PoNeg	PoPos	SSanc	SSprt	TEPE	TDsgn
Cont Lrng Cult	16	72.74*	--	--	--	--	--	--	--	--
Pass Math(PM)	16	2.10*	03	1.16	.18	1.98	5.77*	2.48	00	1.66
Pass Read (PR)	16	2.02*	.08	03	3.91*	03	7.41*	2.96	02	92
PM x PR	16	49	01	16	30	1.23	3.73*	.22	.16	1.26
Cont Lrng Cult	16	72.37*	--	--	--	--	--	--	--	--
Pass Both[c]	22	7.12*	200.56*	32.16*	58.65*	97.12*	34.03*	35.52*	242.96*	78.59*

Note: Multivariate F ratios were generated from Pillai's criterion. Wilks lambda, Hotellings trace, and Roy's gcr were also significant.
[a] Multivariate df = 16, 539 [b] Univariate df = 1, 554
[c] Multivariate df = 16, 541 Univariate df = 1, 556
*$p \leq .05$

Discussion

Published research examining the relationship between workplace literacy and organizational training-related factors is virtually non-existent. This study sought to explore whether groups differing in job-related basic skills also differed in their learning transfer system perceptions. Although a few significant differences were found for individuals with and without adequate math skill as well as those with and without adequate reading skills, perhaps the finding of most practical significance emerged in a comparison of groups who passed both exams versus those who failed one or both. The comparison between pass both and fail 1 or 2 showed a significant difference between the two groups across all 16 learning transfer variables.

These results suggest, first, that the effect of basic skill levels may be summative in the sense that individuals who have adequate levels of more basic skills view training and transfer-related variables increasingly different from those who are able to meet relatively fewer basic skill requirements. Second, the often paradoxical differences in perceptions between these two groups suggest the existence of a complex relationship between basic skill levels and learning transfer system perceptions. For example, in the pass both analysis, the fail 1 or 2 group reported higher levels of motivation-related variables (motivation to transfer, transfer effort-performance expectations, performance-outcome expectations, positive personal outcomes) but greater levels of negative outcomes resulting from the application of training. This group also saw supervisors and managers as both more supportive of transfer (supervisor support) and more negative in their responses to efforts to apply new learning (supervisor sanctions). This may indicate that individuals who do not have adequate basic skill levels may have inflated expectations about the value of training, perceive support for learning, but are less able to transfer new skills and knowledge effectively (perhaps due to learning difficulties) and consequently encounter more negative responses when it comes to the application of learning. The pass both group, on the other hand, perceived greater work group support for learning transfer (openness to change, peer support) and greater opportunities to use new learning (opportunity to use) but less self-confidence in their ability to apply new learning on the job (performance self-efficacy) and less motivation to do so.

It should be noted that some of the mean differences between the groups were small. This study had a very large sample size that provided high statistical power for detecting even small effect sizes. Nonetheless, the ability to test transfer perceptions in a more complex design (MANCOVA) and the large number of significant differences suggests that the findings may have important practical implications.

There is a tremendous need for learning transfer research to focus more on how to diagnose and then actively change and manage effective learning transfer systems. This study addresses one aspect of differences between learners that will affect learning transfer. The magnitude of the workplace literacy problem suggests it has the potential to undermine the ability of individuals and organizations to improve performance through learning. If low-literacy workers do perceive learning transfer systems in qualitatively different ways, then alternative interventions may be needed to influence their learning transfer. In addition, if the workplace literacy skill gap continues to increase, then the potential exists to make changing learning transfer systems even more difficult.

There are also important implications for learning transfer researchers operating in organizational environments with significant numbers of low skill employees. This research suggests that basic work skills have the potential to influence relationships between learning, transfer system perceptions, and job performance. While we can not be sure of the magnitude of the effect, these findings suggest that transfer research in these environments might need to control for basic work skills or risk introducing substantial "noise" into the analysis.

In sum, this study may spark more questions than it answers. One of its key contributions lies in the link it establishes between two construct domains not previously linked in the literature, learning transfer system perceptions and basic work skills. In addition, it clearly suggests that basic work skills have some type of relationship with transfer system perceptions and that the relationship may be a much more complex one than expected. Finally, it suggests the need for new avenues of research to better understand how learner characteristics influence learning transfer systems. Research on learner characteristics has focused heavily on influences during learning events, but very little on transfer systems.

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Survey Evidence from College-Bound High School Graduates: Implications for School-to-Work and Human Resource Development

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This paper reports initial research into the relatively unexplored role of work in the lives of recently graduated high school students. The contribution to the literature is the description of early work patterns, reasons for working, and implications in the context of School-to-Work (STW) literature and the rethinking of evaluative criteria with respect to human resource development (HRD). As such, this paper is a presentation of fresh data that suggest there are important omissions in our understanding of the youth labor market.

Keywords: School-to-Work, Teen Labor Market, Youth Workers

Current wisdom is that formal education will play an increasing role in meaningful employment and sustained employability. The policy that complements this wisdom is government intervention to gear the American economy in spirit and practice for the implementation of programs that incorporate continuous, lifelong, and employment relevant learning. Increased labor market mobility also means that employer investments in individuals require a shorter payback period, underscoring the importance of increasingly sophisticated screening criteria that accurately reflect desirable labor market experiences. These dynamic changes challenge those in the HRD profession to develop and apply more comprehensive knowledge about workers in order to adapt to a blending of education, work, and human capital investment.

A great deal of research, thought, and policy making have been devoted to this new labor market modernity, giving rise to the implementation of School-to-Work programs. While designed to harmonize the labor market from both the demand side (early employer involvement in human resource development via collaboration with the educational system) and the supply side (improving individual career choices and preparation, particularly of high school students), the research basis for policy and program development has relied on incomplete models of applied skill development and related program evaluation. What has in the past been defined as the casual market for high school youth labor has been largely ignored. This is a significant oversight with respect to identifying relevant skills and predictive labor market behaviors.

This paper examines the motivations and behavioral patterns associated with labor market activity of recently graduated high school students. By expanding our understanding of the teen work experience to include the open market perspective with the program (e.g., STW) driven perspective, a more comprehensive theoretical and empirical basis for scientific scrutiny is possible. The limited scope of the data collected in this study does not justify definitive claims, but rather intones forceful suggestion and a committed start to isolating the roots of successful labor market behaviors manifested during the high school years.

If we truly believe that blending work and education is the key to sustaining competitive economic performance, then we must at least revisit the efficacy of the models we have relied upon in order to consider possible improvements. The intent herein is not to offer a competing formal model. The descriptive statistics presented are not sufficiently rigorous for this undertaking. However, by offering insight into a relatively unexplored niche of education-work blending by high school teens perhaps some emerging implications for STW and HRD may be gleaned.

Representative Literature

Historically, the U. S. educational policy has not embraced formal programs that define paths of progressive learning and application in the education and work environment. However, in 1994 the U.S. Congress passed the Schools-to-Work Opportunities Act, that in concept at least moved closer to government intervention in the interest of assuring a viable education-labor market linkage that supports economic growth and development. Yet, there

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remains a sharp contrast of ideas about the usefulness of such policies. On one hand, the thinking is that the relationship between business and education has somehow become dysfunctional and school-to-work programs are one way to remedy this perceived problem (Olson, 1997). Alternatively, economic conservatives deplore the idea that government attempts to legislate decisions that diminish either the role of the parents or the maturing decision making capacity of teens (Wolfram, 1999).

Philosophical disposition aside, we know too little about teenage economic behavior in general and their labor market activity in particular. Between the two idealistic extremes described above are some penetrating practical questions. A few are receiving some attention from researchers. One example is whether the disposition to pre-select STW participants for employment after high school graduation in effect creates a closed market vis-à-vis the traditional competitive market. In other words, do STW participants fare better or worse in employment and career prospects, for example through internships and then employment by the same firm, compared to how they would have fared in an open market without government programs (Fabian, Lent, and Willis, 1998)? Alternatively, we could also pose the question of how these labor market outcomes compared to non-STW participants.

From a different perspective, Gardecki and Neumark (1998) examined the churning and mobility dimensions of early life labor market behavior. They concluded that adult labor market outcomes from the early 20s to mid-30s are mostly unrelated to earlier labor market experiences, which are defined as faster transitions to more stable employment relationships. This conclusion cuts into the logic of STW programs designed to ferment earlier and progressive attachments to career paths in industries, occupations, or employment with specific firms.

A concise rendition of the status of theory about STW by Blustein, Phillips, Jobin-Davis, Finkelberg, and Roarke (1997) concludes that the dearth of research about work-bound youth is disconcerting. They further opine that scholars and policy analysts are drawing conclusions on "...global assumptions about or superficial contacts with work-bound youth; notably absent are the voices of work-bound youth." (p. 2) The broader scope of this condition is identified by Pauly, Koop, and Haimson (1995), who state, "Starting a school-to-work program also requires detailed knowledge about students--their needs, their interests, their goals for the future, and the ways they think about the present..." (p. 67)

This author takes issue with none of these conclusions, but the theoretical and empirical scope is still too narrow. The inclusion of information from college-bound students and work-bound students is necessary for a holistic theory. Furthermore, a shortcoming of all these studies is that the analysis is focused on the post-high school employment, and there is little measurement and less theory about high school students' work behaviors in both the work-bound and college-bound categories.

Following is a summarization of the generally accepted framework of developmental learning as related to employment. First, the U.S. Congress, Office of Technology Assessment (1995) describes the continuum of the STW transition in a progression of work-based learning experiences. This context includes: early grade field trips, middle or early high school job shadowing, early high school community service or volunteer activities (and extracurricular activities), later high school based enterprises, and then part- or full-time work positions, possibly combined with cooperative or apprenticeship programs. Within this spectrum, this paper is primarily focused on the part- and full-time work components. However, as the data will indicate, some of the other factors were manifested in responses.

Second, a framework of learning content was summarized succinctly in the 1991 U.S. Department of Labor, Secretary's Commission on Achieving Necessary Skills (SCANS). A condensed version of what work requires of schools is given below.

Five Competencies

1. Resources: allocating time, money, materials, space, and staff.
2. Interpersonal Skills: teams, teaching and serving others, leading, negotiating, cultural diversity skills.
3. Information: acquiring, organizing, maintaining, and evaluating data; using computers to communicate and process information.
4. Systems: understanding social, organizational, and technological systems, monitoring and correcting performance, and designing and improving systems.
5. Technology: selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies.

Foundations of Competencies

1. Basic Skills: reading, writing, arithmetic and mathematics, speaking, and listening.
2. Thinking Skills: thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn, and reasoning.

3. Personal Qualities: individual responsibility, self-esteem, sociability, self-management, and integrity. (p. vii)

The survey data compiled in this report do not address all the items above, nor do they definitively address any one of them. The summary is provided to serve as a foundation for understanding the breadth of the field of inquiry possible, and where applicable commentary on related factors included in this study are offered.

As a final preliminary, consider the negative tone of the following quote that is representative of the writing on this topic (see also Bailey, 1995, p. 5 and Barton, 1996, p. 137 for other examples). "Recent high school graduates have no such record and information [of competence and reliability] on the student's high school performance…so the entire graduating class appears to employers as one undifferentiated mass of unskilled and undisciplined workers" (Resnick & Wirt, 1996, p. 93). The data in this case study do raise doubt about the empirical basis for the gross assumption that teens have little worthwhile experience to offer. The prospect for error of reliance on this assumption appears to be related to market information imperfections and lack of research.

Most of the remainder of this paper presents survey data describing the pattern of high school student labor market behavior and related variables. This sharply contrasts with the traditional post-high school labor market behavior with which most employers and academics are familiar.

Methodology of This Study

In the summer of 1999 a one-page questionnaire was administered to 2,153 incoming freshmen at Middle Tennessee State University. As such, the chronology of this data collection effort is not strictly from *current* high school students, but as the title of this paper implies, from recent high school graduates. This approach proved considerably more efficient than geographically dispersed data gathering, especially since this was a limited pilot test of the survey instrument.

There were 1,623 returns for a gross response rate of 75.38 percent. The data were isolated to the 17, 18, and 19 year olds in order to ensure the analysis was narrowed to recent high school graduates. Data were all self-reported and covered a range of variables including labor market behavior, reasons for working or not working, level of parentally provided allowances, and perceived impact of working on the allocation of time to study and the impact on grades. This was a pilot study designed to gather initial information for a more concentrated and direct survey of high school juniors and seniors during the 2000 academic year. This latter survey will collect data on both college-bound and work-bound students.

The point of survey administration was the freshman orientation process. Those administering the survey were upper division university students with whom the author extensively discussed the procedure and possible refinements based on the experiences of these students. (A copy of the survey instrument is available upon request.) One of the objectives of this pilot survey was also to gain experience in the nuances of survey design for teen response. Consequently, the survey instrument will be redesigned to incorporate the experiences gained, and in particular to capture information about those students who are not college bound. Therefore, this study is best characterized as a case study, with defensible empirical data, but no pretense for scientific generalization of findings. As an initial effort, the lessons learned in refining the methodology and the survey instrument will prove extremely instructive for replication.

Empirical Findings

This study was initially conceived to explore the factual basis for anecdotal evidence that high school students were engaging in intensive labor market activity. Impetus was also indirectly generated from colleagues asserting that our own university students were working more and spending less time on academic pursuits. The obvious connection between the two is the carryover behaviors of working, college-bound high school students to the university experience. Therefore, the study was not initially designed with specific hypotheses testing as related to SWT or HRD program design. Still, the surprisingly high response rate and rather rich bank of data collected lend themselves to the issues previously raised.

The descriptive statistics in Table 1 illustrate the hours worked measurement. To represent the intensity of student work activity, these statistics omit the "zero hours worked" responses. These observations roughly conform to other widely varying estimates for this age and education cohort. For example, Poczik (1995) asserts that 80 percent of eleventh and twelfth grade students work outside school, and Osterman (1995) reported that 31 percent worked, but 44 percent were in the workforce when those seeking employment were included.

Table 1 reflects the labor market behaviors of academically successful students (defined as college bound) and possible linkages between attributes of college-bound students and a higher probability of career success. Finally, these data indicate a strong tendency of students, beginning during the junior summer, to blend work into the school year, continue that activity through the senior academic year and the summer after. This indicates that through their own labor market initiatives teens are already pre-disposed to the blending of work and school in the context of the continuous learning model that is so highly idealized in the literature.

Table 1
Descriptive Statistics of 17-19 Year Olds' Weekly Work Hours

Total hours Worked during:	Number of Responses	Mean of hours worked	Median of hours worked	Mode of hours worked	Std. deviation of hours worked
Jr. summer	982	31.31	30	40	11.19
Sr. year	1121	20.64	20	20	8.13
Sr. summer	1026	33.19	35	40	11.70

Table 2 describes the reasons given by teens for working. Students were asked to rank their top three choices. Note that for second and third ranked choices, the only appreciable change in the order was the entry into the top three by clothing purchases in third ranked choices, and this variable is arguably correlated with dating and social activities. The motivation to work in order to support vehicle and dating/social activities perhaps best conforms to beliefs reflected in anecdotal evidence from academic colleagues. A bit surprising is the prominence of the "educational savings" response, even for college-bound students. While "developing skills" did not show up as a high proportion, from the STW perspective there is some gratification in that the topic is at least on the radar screen.

Table 2
Highest Ranked Reasons for Working

Reason	Number of responses	Percent of Responses
Vehicle purchase or upkeep	269	28.7
Dating/social activities	225	24.0
Savings for further education	157	16.7
Develop employment skills	57	6.1
Computer, electronic, sports equip.	17	1.8
Independence from parents	93	9.9
Help parents with expenses	23	2.5
Support own family	5	0.4
Clothing, jewelry, cosmetics	54	5.8
Other	38	4.1
Total	938	100.0

These are interesting results in that several measured items do convey a seriousness of these students that undermines the negative tones and gross assumptions about this labor market described above. Even for the vehicle, dating/social activities, and clothing variables, an alternative assumption about the long-term employment implications is plausible (certainly no less gross than the casually undervalued behaviors of the youth labor market). While we older ones may quibble about style, there is an unequivocal argument that success in the labor market at any age is strongly related to mobility, dressing for the part, and getting along socially. This is one example of how a bit of data may recast the interpretation of teen behaviors in a light more favorable to human resource development by recognizing the promise of those behaviors in the context of employment priorities.

The survey also queried students as to why they did not work during high school years. The total number of responses, and responses by category, justify little more than conjecture. However, they are very suggestive of the direction of probative research relevant to STW design and employer considerations. Table 3 summarizes these observations. This inquiry enters some rather murky waters in that compared to compensated labor market activity, even less is understood about the complex mixed motives of parents and teens in response to the allowance subsidy and academic performance. Still, we can observe the relatively small number of responses to lack of employment opportunity ("no job"), and the ever-present competition for time, manifested in the "extracurricular" variable.

Table 3
Reasons for Not Working

Reason	Number of responses	Percent of Responses
Adequate allowance	27	11.5
No job	11	4.7
Grades would suffer	37	15.7
Parents opposed	36	15.3
Chores	7	3.0
Extracurricular activities	103	43.8
Other	14	6.0
Total	235	100.0

The survey data offer additional depth on the allowance, earnings, savings, debt measures, and academic performance of high school teens. With respect to the allowance from parents, of the 1,446 respondents to this question, 29 percent indicated they received no allowance; 54 percent received up to $100 per month; 15 percent received between $101 and $500 per month, and the remaining 2 percent indicating above $500 per month. This author could not find the allowance effect addressed in any of the STW literature. For labor economists the theory and empirical implications of subsidies for labor market behavior are well known, and at a minimum this variable would appear to warrant considerable thought in implications for a segmented population of candidates for STW. As a follow-up note from the continuing progress of new phases of this research, many high school students have remarked to the author that parentally provided debit cards, gas cards, phone cards, and the restricted use of credit cards should be factored into the nature of the subsidy.

The monthly earnings of 1,463 responding high school students were distributed with 13 percent earning up to $100 per month, 19 percent between $100 and $200, 37% between $201 and $500, and 14 percent more than $500 per month. The remainder reported zero earnings for work, an anomaly perhaps reflective of uncompensated work in family establishments, or a survey instrument design flaw. These observations may not debunk the casual nature of the teen labor market, but they do indicate that the economic value derived form that market for the teens is not inconsequential.

Personal savings were also measured, but interpretative caution is also warranted because savings in this context may run counter to economic theory that equates savings to income less consumption. The survey did not identify sources of savings, which might include work-related earnings and/or family indirect subsidies. Only 11 percent of 1,482 responses indicated no savings; 46 percent indicated up to $1,000; 37 percent indicated between $1,000 and $5,000, and six percent reporting above $5,000. Whether derived from one's own earnings or family contributions, these magnitudes still infer planning for the long term, something for which youth are often criticized as lacking. With respect to debt, as expected, a high (85) percent responded they had no personal debt. Nine percent indicated less than $1,000, and the remaining six percent indicated greater than $1,000 in personal debt.

A verifiable measure of academic performance was not undertaken in this project because of student privacy issues and layers of permissions required for access to academic records. The survey instrument did ask for students about the impacts of work on study time and grades. A large majority reported no change for study time or grades, respectively 70 percent of 1,186 responses, and 79 percent of 1,189 responses. Twenty-eight percent did reply that work decreased study time, and 10 percent indicated that grades were adversely impacted. One possible explanation for this seeming inconsistency is the increased maturity of teens in the allocation of time. This theme is frequently repeated in the open-ended responses, which can be accessed online (Hannah, 1999).

Beyond these measures, students were asked to identify whether they were enrolling in the Honors College or one of five other colleges at Middle Tennessee State University. The inference is that the higher admission standards for the Honors College might shed some light on the characteristics of this group of students, relative to the presumed enrollment under standard admission criteria for the other colleges. (Standard admission requires a minimum ACT composite of 20 or a minimum high school GPA of 2.8 on a 4.0 scale. Honors admission requires an ACT composite of 26 or higher, regardless of GPA, or an ACT composite of 20 or higher and a GPA of 3.5 or higher.) Comparisons showed a remarkably consistent picture of students' perceptions of time allocation and academic relationships to working between these two groups, which we might characterize as academically successful (admitted to a university under standard criteria) and academically superior (honors students).

However, a somewhat different picture emerges if the mean hours worked are associated with the impact responses. Clearly, the college-bound honors students are indicated as working fewer hours in each response category. As to whether these few hours of difference is a significant variable in actual academic performance can not be answered on the basis of these descriptive statistics. Still, a reasonable conclusion is that the vast majority of teens do not perceive a relationship between work hours and academic performance, but the quality of this perception may be heavily influenced by the hours worked. The difficulty lies in how to rationalize the non-honors responses, non-responses, erroneously responses, and undecided responses. This is a matter of ongoing refinement of the database but an examination of the data in Table 4 does arouse suspicions with respect to the consistency of honors students working marginally less in almost every category. To argue that superior academic performance may reside in a mere margin of one or two hours per week of reallocated time is too heroic for this author. If there is any argument to be made from these sketchy statistics, it may be that a stronger footing can be found in asserting that, in and of itself, work as measured in this study is no detriment to academic success.

Table 4
Comparison of Standard Admission and Honors College Students' Weekly Work Hours

Group	Number of responses	Mean of responses	Median of responses	Mode of Responses	Standard deviation
Standard Admission					
Jr. summer	811	28.48	30.00	40.00	14.30
Sr. year	845	20.74	20.00	20.00	8.66
Sr. summer	824	30.82	32.50	40.00	14.46
Honors College					
Jr. summer	274	27.72	30.00	40.00	14.02
Sr. year	292	18.47	19.00	20.00	8.46
Sr. summer	282	30.26	30.50	40.00	14.22

Implications for HRD and STW Linkages

Successful and efficient development of the human potential for productive work requires predictability. Historically, employers have used either academic credentials or past work experience as screening devices for selection and human capital investment. The data reported herein strongly suggest that there are significant misconceptions and probably under-evaluations of the work experience and motivations of teens who have worked during their high school years. An important qualification of this argument is the limitations of the data, particularly the absence of comparative data for strictly work-bound students. The assumption that carries the argument is that college-bound students will be more economically successful than their counterparts, and hence a deeper understanding of the earlier traits of this group may guide the refinement of HRD policies and procedures to consider those traits, even for the labor pool of non-college educated applicants or employees. This assumption, coupled to the data presented, also counter the negative tone of scholarly evaluations of youth labor markets. The deeper we look the more substance there is to be found.

As a practical matter the suggested criteria from this study around which recruitment and investment in work-bound students may be built include the following, which are interdependent with early work experience.

- Measures of maturity: time allocation, balance work and grade objectives, desire for independence.
- Ability to develop a long-run view: savings and employment skill development.
- Diverse social experiences: extracurricular activities that include school and non-school commitments.
- Social interaction: dating and social activities.
- Mobility: vehicle.

As a matter of intellectual interest, the role of the allowance and other subsidies is an attractive research target for the future. The interplay of parental generosity and work motivation of teens is an intriguing question in the identification of traits that may be of interest to HRD.

The interdependence of work and education is becoming more complex, and we need better models of predictability of success for human capital investment. For employers, this means developing a more accurate and more holistic picture of work related experiences of high school students. In the hoopla over school-to-work programs and continuous or lifelong learning concepts, we have likely overlooked insights into theory and practice by not sufficiently exploring the teen labor market.

Finally, the linkage between HRD and STW runs deeper than the cooperation between business and education in program implementation. If STW is in fact creating a partially closed market from which the best employment prospects can be creamed, then, taken individually, employers participating in the programs ensure themselves a higher quality labor pool. However, taken as a whole, all employers can not benefit. The identification of desired employment traits (a service of STW program screening) is observed less frequently as all employers dip further into the labor market queue. Furthermore, firms must be of a size to justify the allocation of resources to participate in these programs (hence the consensus in the literature that employer associations are the best avenue with which to build an intersection of HRD and STW).

Idealistically, the interventionist view is that STW programs should extend to cover the entire eligible population. This would theoretically raise the bar of employment qualifications for everyone. Realistically, this is not going to happen. Teens themselves show a proclivity to enter the competitive market because it best accommodates their motivations and choices. A very significant point to be made is whether STW programs can compete with these flexible traits of the open market. Standard evaluation of STW programs tends to focus too exclusively on post-program success or failure, and broader based labor market studies tend to focus on post high school cohorts long past graduation. A more robust body of knowledge is possible by including high school students' work behaviors and motivations. The following list suggests the comparisons around which more research is warranted.

- Qualities of the competitive market that are more appealing to teens than those of STW programs.
- Comparison of employment placement success of STW participants to competitive market participants.
- Labor market behavior modifications (for STW or competitive market) of teens via parental subsidies.

Conclusions

There is always a temptation to read more into one's data than good scholarship merits. In the context of STW or HRD the greatest deficiency in the survey data used in this report lies in the lack of direct measurement of work-bound student behaviors. While future research plans include gathering data directly from high school students, thus allowing a comparison of work-bound and college-bound characteristics, the assertions herein must remain indirect in that college-bound students exhibit traits that employers would also find desirable in work-bound students.

While progressing to the formal modeling stage is tempting for curiosity's sake, the data upon which this paper is based require more refinement (an ongoing process) for meaningful investigation into correlation and causation. The purpose of this paper has not been to test hypotheses, but to suggest hypotheses by describing little explored terrain. These are typical methodological limits of a case study. More formal modeling will proceed once more direct survey data are acquired from high school students.

As a final thought, academics have for the past decade pounded the drums signaling change in the structure and process of labor markets--e.g., mobility, contingent workers, team production, technology, and learning models. Admittedly, the observed behaviors of working high school students may be ephemeral in the long run. However, some of those behaviors may stick, and they may be very different from our standard labor market model predictors, or from the expectations of practitioners in allied HR fields. The single most important message of this paper has hopefully been to open our minds to the suggestion that we know all too little of teen economic behaviors in general.

and teen labor market behaviors in particular. Economically rational policy making by government and firms demands more.

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Teaching Strategies in a Synchronous Learning Environment for Adult Students

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This study investigated students' learning styles and reported preference for teaching strategies in a synchronous distance learning environment. Its aim was to improve instruction by using learning styles as a frame of reference guiding the design of instruction. Intact cohort groups enrolled in the spring semester 1999 responded to two learning style instruments and a demographic questionnaire. Results indicated preference for the utilization of discussion, peer-teaching, independent study, and lecture in this instructional environment.

Keywords: Adult Learning, Video Conferencing, Learning Styles

Significant socio-economic changes over the last two generations have placed an increasingly higher demand on continuing and adult education to attend to a variety of societal variables. More recently, advancements in telecommunication and computer technologies have simplified the access to information and changed the economic structure from production-based to knowledge-based (Drucker, 1998). Consequently, the increasing number of individuals seeking to further their education is no longer constrained by the traditional structure of higher education and many pursue their objectives with the aid of new technologies.

In response to the increased demand for knowledge and lifelong learning, institutions of higher education have launched programs of adult and continuing education that have incorporated new technology and reshaped the field of distance education. As a result, the application of adult learning theory to the new educational environment shaped by an influx of adult students and technology is a way to guarantee the quality of the educational experience.

This research was conducted to determine the learning style preferences of adult students enrolled in Bowling Green State University's (BGSU) Bachelor of Science in Technology program with a major in Advanced Technological Education (ATE). The core courses of the ATE program are taught by faculty of the College of Technology using synchronous learning environments(SLE) under the joint administration of Continuing Education, International, and Summer Programs, and the Department of Visual Communication and Technology Education.

This study investigated adult learners' learning styles and their reported preference for teaching strategies in a synchronous distance learning environment for adult students at BGSU. Its aim is to aid instructors in improving the efficacy of instruction in this environment via the utilization of learning styles as a frame of reference guiding the design of instruction.

The significance of the present study is in verifying the characteristics of adult learners engaged in a synchronous nontraditional learning environment, given two basic premises. First, the increasing number of adult students seeking higher education heralds a period of greater demand for access to education. The National Center for Educational Statistics (1997) predicted that by the year 2000, 60% of post-secondary students would be working adults over 30 years of age, studying part time.

Second, these students would be taking advantage of the diversity of distance education offerings in higher education in order to reduce unpleasant educational experiences.

> One of the chief complaints returning students have about graduate and professional programs is that they're set up in ways that virtually guarantee students will not be treated like full-fledged adults -- regardless of whether they are twenty-two years old or twice that age. (Glassner, 1994, p. 176)

Therefore, this study intends to assist with the identification of the instructional needs and concerns of an increasingly large segment of the student population in relation to its educational environment of choice. This way, it is expected that college officials and faculty members will gain a better understanding of these students and will be better prepared to provide the educational experiences they seek.

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Review of Literature

The theoretical foundation of this study rests on three bodies of knowledge: adult education, distance education, and learning styles. Andragogy, as a fundamental theory of adult education, was initially conceptualized by Knowles (1980) as "the art and science of helping adults learn" (p. 43) in contrast to pedagogy, or the "art and science of teaching children" (p. 43). This fundamental model of adult education was based on the learner in terms of his or her need to know, self-concept, the role of the learner's experience, readiness to learn, orientation to learning, and motivation (Knowles, 1973/1990, 1980). The application of the andragogical model in the education of children generated enough feedback to force a correction to the original proposition. Knowles (1984) redefined andragogy as no longer antithetical to pedagogy, but rather parallel to it. The application of each depended now on the instructional situation and no longer on the learner's age.

Additionally, the andragogical model implied a process made up of seven basic elements: climate setting, mutual planning, diagnosis of educational needs, formulation of educational objectives, and the learner involvement in the design, conduction, and evaluation of the learning experience (Knowles, 1973/1990, 1980). Fundamental in this process was the recognition of the learner's individual characteristics and how they influenced the learner's performance during the educational experience.

Many of the ideas expressed by Knowles in the formulation of the andragogical model are common to those expressed in self-directed learning (Houle, 1961; Knowles, 1975; Tough, 1979). Together, they characterize adult learning as student-centered, taking into account the learner's previous experiences, where the role of the teacher is to facilitate the educational process.

The qualification of SLE's and adult learners is a key element in understanding this study. Distance education at BGSU was developed based on the convergence of two or more classrooms where instruction was delivered through two-way compressed videoconference technology. Therefore, SLE's refer to distance education delivery through this technology. Accordingly, the example in the literature that best fits the SLE created at BGSU was provided by Simonson and Schlosser (1995) in their description of the Iowa Communications Network. The authors described distance education as the "formal, institutionally based educational activities where the teacher and learner are normally separated from each other in location but not normally separated in time, and where two-way interactive telecommunication systems are used for sharing video, data, and voice instruction" (p. 13).

The definition of an adult student based solely on an individual's age was no longer functional. For the purposes of this study, an adult student or learner was defined as one

> who has experienced a break in the formal educational process; who, while attending college part- or full-time, also works part- or full-time to provide primary support for self and/or others; has established primary residence other than with the primary caregivers during the high school years; or has assumed primary life roles other than that of student (Hoff, 1997, p. 58).

Research in distance education has identified no significant difference in the effectiveness of the traditional and the distance learning environments (Miller & Clouse, 1994; Musial & Kampmueller, 1996; Russell, 1998; & Whittington, 1987). Therefore, the difference to be accounted for rests on the learners' perception of the effectiveness of the learning environment in meeting their educational needs. This perception can be affected by a variety of factors that may be better understood through knowledge about individual differences. For this purpose, the investigation of individual learning styles may reveal key factors in the design of instruction that will have a positive impact on the learning environment and on the learner. Research on learning styles was based on knowledge of the social, physiological, and psychological aspects of the educational process. Accordingly, many different models of learning styles were developed and their respective instruments used to measure their constructs.

For the purposes of this study, learning styles were defined as a "biologically and developmentally imposed set of personal characteristics that make the same teaching method effective for some and ineffective for others" (Dunn, Beaudry, & Klavas, 1989, p. 50). This model postulated the accommodation of individual learning preferences, resulting in greater academic achievement and improved learner attitude (Dunn, Griggs, Olson, Beasley, & Gorman, 1995).

Research Questions

The questions guiding this research study were: (1) What is the correlation between learning styles, as assessed by the Dunn, Dunn, and Price's (1992) Productivity Environmental Preferences Survey (PEPS) and students' preference for a teaching strategy, as measured by the Renzulli and Smith (1978) Learning Styles Inventory (LSI), in a synchronous learning environment? And (2) What are the correlations among the teaching strategies applied in a synchronous learning environment, as assessed by the Renzulli and Smith (1978) LSI?

Limitations

The limitations identified in the present study concern the generalization of the results to educational environments using similar instructional technology. Also, findings may only be applicable to similar demographics.

The population of this research study was the intact ATE cohorts enrolled in the spring semester, 1999. As a requirement for joining the ATE program, students were asked to provide proof of completion of an Associate Degree with a technical concentration and a minimum of five years work experience. As part of the ATE program, all cohort groups are offered a core curriculum made up of 11 classes that are delivered by videoconferencing technology. For other degree requirements, students utilize local Community Colleges and transfer the respective credits to the ATE degree. The cohort groups involved in this study had completed a different number of core classes and one of the cohorts had completed all the 11 core classes delivered by distance.

A response rate of 70% was obtained from this study. Descriptive statistics were used to report measures of central tendency regarding preferences for learning styles, teaching strategies, and demographics. The Pearson's Product-Moment Correlation was used to draw inferences regarding the relationships among students' preferences for instructional strategies and learning styles. Useful correlations were determined by analyzing correlation coefficients for their statistical significance. An initial level of confidence of 95% was set for all calculations.

All students reported attending classes on a part-time basis. Demographic information obtained from respondents regardless of the location of the remote sites indicated that a typical ATE student is almost 39 years of age, with about 20 years work experience, who has attended a little more than five classes. Major findings included the identification of environmental preferences, Table 1, such as proper illumination, adequate temperature, and formal design; emotional preferences, such as motivation, persistence, and need for structured assignments; sociological preferences, such as learning with peers, with the support of an authority figure, and in different ways; and physical preferences, such as auditory, visual, tactile; need for food intake, time of the day, and mobility.

Table 1. PEPS Results

Preference	40 or lower	Between 40 and 60	60 or more
Environmental			
Sound	-	90.7	9.3
Light*	7.4	79.6	13.0
Warmth*	7.4	77.8	14.8
Design*	9.3	77.8	13.0
Emotional			
Motivation*	1.9	87.0	11.1
Persistence*	-	88.9	11.1
Responsible	9.3	85.2	5.6
Structure*	1.9	53.7	44.4
Sociological			
Alone/Peers*	9.3	61.1	29.6
Authority*	1.9	81.5	16.7
Several Ways *	16.7	75.9	3.7
Physical			
Auditory*	5.6	66.7	27.8
Visual*	22.2	75.9	1.9
Tactile*	3.7	64.8	31.5
Kinesthetic	-	92.6	7.4
Intake*	9.3	61.1	29.6
Evening/Morning*	5.6	79.6	14.8
Late Morning*	9.3	77.8	13.0
Afternoon*	3.7	74.1	22.2
Mobility*	7.4	75.9	16.7

Note: * meaningful preferences

Preferred teaching techniques are reported in Table 2. To determine preference for a teaching technique, every score that averaged 3.0 or higher on the LSI was considered as an indication of preference for the technique. The number of subjects that indicated preference for a teaching technique is presented in the Table as well as the respective percentage of the sample. Percentages may not add up to 100% since subjects may have indicated preference for more than one teaching technique.

Overall, discussion (69%), peer teaching (43%), and independent study (41%) were the top three ranked instructional techniques identified by the students. Lecture (39%) was ranked fourth as a preferred teaching strategy and the technique that showed, percentage-wise, the greatest gender difference percentage-wise. Additionally, one-half of the female students' indicated preference for learning through lecture, against 30% of the male students.
The analysis examined the relationship between modes of instruction and learning style preferences for n = 54 subjects. The correlations between pairs of variables are reported in Table 3. Statistically significant correlations are indicated in the Table, based on number of subjects. At the one percent level, a Pearson correlation of .354 is needed; whereas at the five percent level, a Pearson correlation of .273 is needed. Both critical values represent levels of significance for a two-tailed test.

Table 2. Preferred Teaching Techniques

Modes of Instruction	Females n (%)	Males n (%)	Total n (%)
Projects	7 (29%)	9 (30%)	16 (30%)
Independent Study	8 (33%)	14 (47%)	22 (41%)
Drill & Recitation	3 (13%)	5 (16%)	8 (15%)
Discussion	16 (67%)	21 (70%)	37 (69%)
Lecture	12 (50%)	9 (30%)	21 (39%)
Programmed Instruction	6 (25%)	5 (16%)	11 (20%)
Simulation	4 (16%)	3 (10%)	7 (13%)
Peer Teaching	11 (45%)	12 (40%)	23 (43%)
Games	7 (29%)	4 (13%)	11 (20%)

The findings were presented in the previous chapter. Interpretations and conclusions regarding them are presented in this section. They are organized according to the research questions guiding this study.

First, conclusions regarding the correlation between learning styles, as assessed by the Dunn, Dunn, and Price's (1992) PEPS, and students' preference for a teaching strategy in a synchronous learning environment are addressed. Second, this section addresses correlations among the teaching strategies applied in a synchronous learning environment, as assessed by the Renzulli and Smith (1978) LSI.

Students' preferences for room temperature, amount of light, and the formality or informality in the design of the learning environment are important variables having an impact on their learning. Reflecting on the correlation of these learning style preferences and instructional strategies yields the following recommendations: Instructors should take into consideration the provision of adequate air-conditioning and ventilation when implementing discussion sessions. The use of cool colors in the instructional materials is also desirable. Instructors should also consider the provision of adequate warmth and/or enclosures to students engaging in programmed instruction activities. The use of instructional materials with texture and warm colors should be a consideration when engaging students in programmed instruction.

Even though light and the formality in the design of the learning activity were concerns regarding students' immediate environment, they were not significantly related with any instructional strategy. Therefore, instructors should take these preferences into consideration in the broader context of students' overall needs, levels of comfort, and satisfaction with the learning environment and make sure that adequate light is provided and that the overall arrangement of the room and its furniture are comfortable.

Further considerations regarding students' immediate environment and instructional strategies related to sound. Analysis of the correlation of sound with preference for discussion and lecture indicate that students may be easily distracted by environmental noise when engaging in these activities.

As far as the emotional variables were concerned, students preferred structured environments. Accommodating these variables into the arrangement of learning environments means providing precise instructions about every aspect of the assignments, leaving little room for interpretation.

Further analysis pointing to lecture does not warrant the recommendation of this instructional strategy. First, the significant correlation of lecture with the need for structure reveals that the variation in the need for structure accounts for 9% of the variation in preference for lecture. Second, it only appealed to 39% of the subjects in the sample. So, it is advisable that instructors first consider other factors before resorting to lecturing.

As stated earlier, seeking greater precision in the statement of objectives and guidelines for the successful completion of assignments may be a viable way of providing students the structure they need. Also, it is yet to be determined if preference for lectures is caused by students' familiarity with this technique or some other factor. This statement is reinforced by analyses of students' sociological preferences, which indicated the utilization of known patterns and routines as a desirable feature in the learning episode.

There was preference for learning with peers using known patterns and routines. This technique appealed to 43% of the subjects in the sample, and indicated good acceptance of small group training techniques. To increase flexibility in the use of instructional techniques, thus satisfying students' sociological preferences, instructors could utilize simulations and peer-teaching activities for the SLE.

Concurrently, instructors should provide opportunities for those learners who prefer to work individually instead of in teams. One possibility involves activities that may be completed either independently or cooperatively.

Table 3. Correlation of Learning Styles and Modes of Instruction

	Projects	Indepen't Study	Drill & Recitation	Discussion	Lecture	Programmed Instruction	Simulation
Sound	-0.07	0.05	-0.13	-0.39**	-0.33*	-0.19	-0.22
Light	-0.07	-0.10	-0.15	0.17	-0.01	-0.11	0.12
Warmth	0.14	0.12	0.20	-0.27*	0.18	0.38**	0.01
Design	0.11	0.17	0.14	0.13	0.21	0.20	0.04
Motivation	-0.06	0.05	0.004	0.21	0.18	-0.06	0.15
Persistence	-0.04	-0.03	-0.10	0.01	0.16	0.06	0.04
Responsible	0.01	-0.04	0.20	0.23	0.13	-0.02	0.27*
Structure	0.26	0.12	0.23	0.14	0.31*	0.19	0.05
Alone/Peers	0.26	-0.52*	0.003	0.25	-0.16	0.04	0.48**
Authority	0.09	-0.28*	-0.16	-0.04	0.07	0.03	0.05
Several Ways	-0.28*	0.32*	0.02	-0.13	0.08	-0.17	-0.26
Auditory	0.20	-0.17	-0.14	0.20	0.09	0.13	0.22
Visual	0.17	0.38**	0.25	-0.04	0.19	0.24	-0.04
Tactile	-0.08	0.03	-0.01	0.22	0.02	-0.17	-0.04
Kinesthetic	-0.04	-0.25	-0.24	-0.11	-0.02	-0.07	0.03
Intake	0.04	-0.30*	-0.09	-0.04	-0.36**	-0.15	-0.02
Evening/ Morning	0.07	0.13	-0.02	-0.05	0.30*	0.29*	0.17
Late Morning	-0.15	-0.01	-0.29*	-0.08	0.05	-0.07	-0.05
Afternoon	0.06	-0.12	0.11	0.06	-0.24	-0.02	0.02
Mobility	-0.11	-0.30*	-0.23	0.13	0.02	-0.08	0.13

Note. * $p < .05$ ** $p < .01$

Learners' perceptual preferences included auditory and tactile activities, but rejected visual and kinesthetic ones. As far as auditory preferences were concerned, their positive correlation with the use of peer teaching pointed toward students who preferred to work cooperatively and required precise oral directions to understand, perform, and evaluate assignments. Tactile preferences should be taken into consideration regarding the broader context of students' overall needs and levels of comfort and satisfaction with the learning environment. About 17% of the students indicated preference for the use of objects and other manipulative materials while engaging in learning. A well-balanced use of other multisensory resources, coupled with allowing students to first read and take notes before listening to lectures seem to be a more appropriate course of action (Price, 1996).

At least 22% of the students indicated preference to learn through sensory stimuli other than visual. Additionally, visual preference was significantly correlated only with independent study. Hence, effective instructional strategies to satisfy these preferences point toward instructors allowing students to read the material only after listening and taking notes.

Students' scores demonstrated lack of preference for kinesthetic activities. This fact is reinforced by the lack of significant correlation between this preference and any instructional technique. In turn, the assignment of such activities as readings, television, and real-life experiences is recommended. Additionally, the lack of preference for kinesthetic activities reinforces the utilization of other perceptual preferences instead. However, the result concerning preference for kinesthetic activities seems to contradict instructors' anecdotal data collected when such activities were implemented. This disparity justifies further investigation regarding the results obtained in this study.

According to approximately 22% of the students, the time of the day when they have the most energy and would be the most apt to engage in learning activities was in the afternoon. Even though scheduling class delivery in the afternoon within the present configuration of the ATE program seems unfeasible, it may become a viable alternative for the growth of this program. Provided there was a significant demand for this course and the adoption of technological hardware that incorporated desktop videoconferencing, this program could be marketed to employed adults, and negotiated to reflect the educational needs of a portion of the workforce that has access to such technology. Another benefit of scheduling classes in the afternoon, in conjunction with working hours, is the generation of additional time that adults could spend in their other life roles. However, the successful implementation of this recommendation depends on the culture of students' workplaces and whether management would support flexible work hours.

There was a marked need for intake and mobility during the instructional event. Additionally, both preferences correlate negatively with the preference for independent study. In turn, when utilizing this instructional technique, instructors do not need to worry about planning for the satisfaction of these needs. Given the nature of the technique, the satisfaction of these physical preferences should be left to students' own discretion, an added bonus to instructors at a remote site.

As far as learners' perceptions of the effectiveness of the teaching strategies applied in a synchronous environment are concerned, three of the nine teaching strategies assessed obtained an approval rate of 40% or more. Recommendations regarding the use of discussion, preferred by 69% of subjects; peer teaching, preferred by 43% of subjects; and independent study, preferred by 41% of the subjects are made. Also, some considerations regarding the utilization of lectures are made, given its overall 39% preference rate and its 50% preference rate among women.

The use of discussion as an instructional technique may take many forms. Perhaps, Seaman and Fellenz (1989) may better explain the most significant aspect of identifying discussion as a preferred teaching strategy to be used in SLE. These authors have stated that this technique complements preference for learning with peers and

> for having a degree of control over the learning situation. Interaction and sharing among participants are stimulated by discussion strategies that allow students to work in groups and to interact not only with the materials but also with their peers. Because the teacher does not control discussions, students are able to manage their own learning and direct it to their needs and interests. (p. 120)

Consistent with this statement is the fact that the variation in the scores of discussion accounts for almost 17% of the variation in the scores of preferences for drill and recitation. It also accounts for approximately 10% of the variation in the scores for simulation as a preferred instructional strategy.

The use of discussion as an instructional technique is recommended. Additionally, this recommendation corroborates Knowles' (1980) identification of discussion as one of the instructional techniques "available to help adults learn" (p. 239). According to Knowles, book-based discussion, case discussion, group discussion, guided discussion, problem-solving discussion, and Socratic discussions are specific examples of discussion techniques accessible to instructors facilitating adult education.

The relationship between discussion and drill and recitation is easy to explain. Defined for the purposes of this study as a teaching strategy that "involves a teacher asking questions and calling on students to respond with appropriate information" (Renzulli, Smith, & Rizza, 1998, p. 2), drill and recitation may be an effective way of initiating a large group discussion. According to Ostendorf (1997), "it is far better to kick off a discussion by calling on a particular person or a particular site and asking for ideas, comments, or questions" (p. 57). Therefore, drill and recitation may be an instructional strategy that, if used skillfully and in combination with discussion, may be recommended as a set-inducting instructional technique for SLE.

To a lesser extent, a similar case may be made for the recommendation of simulations as an auxiliary instructional technique in SLE. Knowles (1980) listed different simulation techniques that could be used in the instruction of adults, and further suggested their use to be best suited to the specific behavioral outcomes. Once again, the effective application of the technique in a SLE will depend on its facilitation.

The suggestion of peer teaching as an effective teaching strategy in SLE can be looked at from its relationship with simulation. Since the variation in the scores for simulation accounted for approximately (a) 17% of the variation in scores for peer teaching and (b) 26% of the variation in scores for games, the recommendation of peer teaching is based on its property of reinforcing students' sociological preferences.

Moreover, the use of peer teaching as an instructional technique in SLE reinforces adult students' self-concepts and recognizes the value of their previous experiences to the learning process. By making use of students' experiences and allowing them the opportunity to share their knowledge with their peers, instructors will be strengthening students' motivation to learn and reinforcing their self-identity.

Independent study was the preferred teaching strategy for 41% of subjects. It is also a recommended instructional strategy to be used in SLE. Its recommendation reinforces theoretical postulates concerning self-directed learning, which maintains that students should take primary responsibility for planning, executing and evaluating their learning experiences (Merriam & Caffarella, 1991).

By designing SLE where students take responsibility for the plan, execution, and evaluation of their learning experiences instructors will be putting the andragogical model in practice. Learning contracts may be helpful as a tool assisting in the implementation of instructional activities that attend to student preference for taking responsibility for their learning experiences.

Variation in the scores for independent study accounted for 18% of the variation in the scores for lecture. For the purposes of this study, lecture was defined as a verbal presentation by a teacher or expert, with little interaction between lecturer and audience (Renzulli, Smith, & Rizza, 1998, p. 2). Moreover, half the female students in the sample selected it as a preferred teaching strategy and Knowles (1980) listed it as a possible presentation technique. However, its recommendation as a preferred teaching strategy to be utilized in SLE cannot be made without disregard to some precautions.

When designing instructional activities for a SLE, instructors should be cognizant of the possibly negative effects of this strategy. From an instructor's standpoint, a lecture is a relatively simple activity to plan and deliver, but not an easy one to learn from, especially in a SLE. Long lectures should not be used in this environment because they contribute to the "talking head" effect, which has been identified as an undesirable trait of the SLE.

As in all educational activities, effectiveness cannot be achieved at the expense of thoughtful preparation and experience. Skillful facilitation and instructional design take into consideration not only the appropriateness of an instructional strategy in relation to the content to be explored. However, learners' characteristics are the cornerstone of any successful educational experience.

SLE instructors operate in a unique environment that requires unique solutions. Understanding the application of students' learning style preferences in the design of instruction responsive to students' individual needs may provide instructors with the guidelines to the solutions they seek. Additionally, by providing adult students with educational environments catering to their needs, instructors of distance education will be assisting an increasingly larger portion of the population in accomplishing their objectives regarding lifelong learning and self-actualization.

Results and conclusions reported in this study could be validated by further research. Even though this is not an exhaustive list, topics for further research include the investigation of: (a) other factors in the relationship between learning style preferences and preference for instructional strategies as follow-up using qualitative methods; (b) the significance of learners' previous experiences with the instructional techniques utilized in a SLE in determining preference for given teaching strategies; (c) the variance of learning style preferences when learners pursue other majors such as Business, Accounting, Mathematics, Microbiology, and Humanities in a SLE; and (d) differences between adult and traditional-aged students involved in SLE regarding their learning styles and preferences for teaching strategies.

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The Influence of Learning Style Preferences on Student Success in Online vs. Face-to-Face Environments

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This study compared the relationship between learning style preferences and learner success of students in an online course with an equivalent face-to-face course. Comparisons included motivation maintenance, task engagement, and cognitive controls. Results revealed significant relationships between preferences and course success on five constructs for the face-to-face students and no significant relationships for the online students. Overall, the findings suggest that students can be equally successful in face-to-face and online environments regardless of learning style preferences.

Keywords: Online Instruction, Learning Styles, Student Outcomes

Whether learning takes place in an institution of higher education or in a private, public, or non-profit organization, participants are expected to learn and subsequently apply their new knowledge. During recent years, innovations in higher education have served as a catalyst for changing relationships among students and teachers (Dziuban & Dziuban, 1997). New advances in Internet-based technology have brought challenges and opportunities to education and training, in particular through online instruction. Online instruction is a form of distance education delivered over the Internet. For many, this type of instruction is perceived as a major breakthrough in teaching and learning because it facilitates the exchange of information and expertise while providing opportunities for learners in distant of disadvantaged locations (Webster & Hackey, 1997).

While online instruction is gaining popularity, it is not free from criticism. Many educators and trainers do not support online instruction because they do not believe it actually solves difficult teaching and learning problems (Conlon, 1997) while others are concerned about the many barriers that hinder effective online teaching and learning. These concerns include the changing nature of technology, the complexity of networked systems, the lack of stability in online learning environments, and the limited understanding of how much students and instructors need to know to successfully participate (Brandt, 1996). Online instruction also threatens to commercialize education, isolate students and faculty, and may reduce standards or even devalue university degrees (Gallick, 1998). While these concerns may be unwarranted, there is little research to accurately determine the benefits and pitfalls of online instruction, particularly when compared to the more traditional face-to-face learning environment. Researchers and educators are unsure how students' online experiences differ from their experiences in face-to-face learning environments. Gaining knowledge about the processes and outcomes of online instruction as compared to traditional face-to-face environments will help educators and researchers make more informed decisions about future online course development and implementation.

Problem Statement and Purpose

Although the growth of online programs has been significant in recent years, the capabilities and efficacy of such programs have yet to be fully investigated. According to Hill (1997), online instruction is viewed as a viable option for all types of learners and as a potentially revolutionary resource tool. However, most effort in this area has been devoted to program development while examinations of program quality and effectiveness have been anecdotal in nature (Johnson, Aragon, Shaik, & Palma-Rivas, in press). With little empirical knowledge about Internet-based education outcomes, the need for research in this area is not only timely, but also imperative. An emerging issue in higher education is the use of learning styles research to create more positive, effective learning environments for all students.

The primary purpose of this exploratory empirical study was to examine the relationship of learning style preferences on learning success of students enrolled in an online course with those enrolled in an equivalent course

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taught in a traditional face-to-face format. Comparisons included the environmental factors that maintain student motivation in the classroom, task engagement strategies, and cognitive processing habits (cognitive controls).

While attempts have been made to compare online and face-to-face learning environments, they are often discounted due to the great dissimilarity between the two learning environments. This is a classic example of comparing apples to oranges. According to Johnson, Aragon, Shaik, and Palma-Rivas (in press), "studies of this type should not attempt to determine if one fruit is better than the other, instead, they should demonstrate that, if grown properly, different fruits can be equal in terms of taste and nutritional value." This study is an attempt to determine if properly designed environments that differ on many characteristics can lead to learning success regardless of student learning style preferences. Studies of this type are also important because many faculty who are being asked to design and teach Internet-based courses are wondering if all students can actually be successful in these new online environments. As the evidence mounts in support of the effectiveness of online learning environments, educational research can tackle the more fundamental question of how to optimize instructional designs to maximize learning opportunities and achievement in both the online and face-to-face environments.

Research Questions

This study was designed to answer the following research question.

1. Is there a distinguishable difference in the learning style preferences of students as controlled by the delivery format?
2. How do student outcomes vary across learning style preferences as controlled by the delivery format?
   2a. Do learning style constructs exist that significantly influence student outcomes regardless of delivery format?
   2b. Do learning style constructs exist that significantly influence student outcomes in both the online and face-to-face delivery formats?

Theoretical Framework

A major limitation of the existing learning style theories and models is that the primary focus is on information processing or cognitive habits. Therefore a more comprehensive theory of learning style was sought to guide the study. Curry's (1991) Theoretical Model of Learning Style Components and Effects was selected. Curry submits that specific information processing habits is only one factor that influences learning styles and/or successful learning. She posits that in order to adequately design educational programs that lead to successful learning the constructs of motivation maintenance and task engagement must also be considered.

According to Curry (1991), motivational levels are maintained once the learner establishes preferred environmental and social conditions for learning. Factors contributing to motivation include a general sense of self-efficacy and self-control. The engagement level is defined as "the point of contact between the motivational condition of the learner entering the learning situation and the active processing work required by the new learning task" (Curry, 1991, p. 251). A learner's level of task engagement is reflected in the amount of attention that is paid to features in the instructional situation, how persistent the learner will be, the degree of participation, the enthusiasm, and degree of concentration the learner sustains throughout and beyond the instructional situation. Cognitive controls refer to the information processing habits or control systems that learners bring to learning situations. According to Curry, these cognitive controls take place only after the learner becomes engage in the task.

Method

Instructional Context

Data were collected from two sections of a graduate level instructional design course for human resource development professionals. One version of the course was taught on the campus of a large Midwestern university through traditional a face-to-face format while the other version of the same course was offered totally online, with no direct face-to-face contact between the instructor and the students. Both courses were taught by the same instructor, delivered by the same department, and required the same content, activities, and projects. The instructional treatment of each topic followed the same organization.

Subjects

This exploratory empirical study compared outcome data obtained from students enrolled in one of two versions of a graduate level instructional design course for human resource development professionals. Nineteen students, most of whom are pursuing a graduate degree in HRD, were enrolled in the on-campus course. These students can be viewed as traditional university students who are actively pursuing an advanced degree through full time study on campus. Nineteen students were also enrolled in the online version of the course. These students are also pursuing a graduate degree in HRD through a degree program that is taught completely online. The online group can be viewed as nontraditional students because they are able to complete their advanced degree without ever setting foot on campus.

An important consideration for this type of comparison study is the equivalence of the groups prior to the start of instruction. Official university student records were reviewed to obtain a variety of demographic and academic data for comparison. The slight differences between the two groups in age, the year they received their baccalaureate degree, undergraduate GPA, and years of work experience were non-significant (see Johnson, Aragon, Shaik, and Palma-Rivas, in press). In addition to these general demographic comparisons, the students were asked to respond to three questions regarding their degree of prior training and experience in the instructional design area. The results of this short questionnaire revealed that both groups of students had very little formal experience in instructional design prior to enrolling in this course. Because the majority of the online group was working full time while they completed the instructional design course, a few of them did have opportunities to design training courses as a part of their jobs. Four of the face-to-face students and eleven of the online students had previous experience designing courses. Of this experience, the majority of the students indicated they had designed two or fewer courses that were less than one-half day in length. Although several online students had prior experience designing courses, only three of them indicated they had formal training in the instructional design process; one as part of his undergraduate coursework and the other two through a 3-day seminar. Three students in the face-to-face group had also indicated previous instructional design training through university courses and workshops.

Instrumentation

Three learning style instruments were selected to measure each one of the learning constructs. These instruments were selected based on Curry's (1991) previous analyses of psychometric evidence showing that each had acceptable levels of internal and temporal reliability as well as construct and predictive validity.

The Grasha and Reichmann *Student Learning Style Scale* (Riechmann & Grasha, 1974) was used to assess motivation maintenance. The SLSS consists of 90 self-report items. A 5-point Likert-type scale describes the learner along the bipolar scale dimensions of independent vs. dependent, avoidant vs. participant, and collaborative vs. competitive. Task engagement was assessed by the Weinstein, Palmer, and Schulte (1987) *Learning and Study Strategies Inventory*. The LASSI contains 83 items. Subjects are asked to respond to the items on a five-point Likert scale. The items are sorted to ten variables including anxiety, attitude, concentration, information processing, motivation, scheduling, selecting the main idea, self-testing, study aides, and test strategies. Finally, cognitive control functions were assessed through the Kolb (1985) *Learning Style Inventory*. The LSI was developed around Kolb's experiential learning model. The LSI contains 12 sentence stems, each having four sub-items to be rank ordered. Responses are organized into two bipolar concepts: concrete experience vs. reflective observation, and abstract conceptualization vs. active experiementation.

Procedures

All date were collected near the end of the semester as part of a discussion and activity on learning styles. All students completed paper versions of all three instruments. The online students received and returned the instruments through the mail. The face-to-face students completed and returned their instruments during a class session. All instrument data were entered into a statistical analysis package for later analysis. Statistical analyses were conducted using independent t-tests and bivariate correlation analysis. All statistical tests reported in this paper were conducted with a significance level of .05. The search for distinguishable relationships in student outcomes (i.e., content knowledge and quality of course assignments and projects) across learning style preferences was conducted using the final course grades that were assigned to each student by the instructor.

Results

Learning Style Differences

Results of the independent t-tests indicate no significant differences in the social and environmental preferences between the students of the two delivery formats. Table 1 presents these results. Table 2 reveals that both the face-to-face and online students are also comparable in their learning and study strategies with the exception of "study aids." This particular subscale assesses how effective students are at using support techniques and materials above and beyond those required by the course. This result indicates that the face-to-face students reports greater use of such techniques and materials (M = 30.17, SD = 4.76), t(34) = 4.10, p < .05. Finally, Table 3 reveals significant differences in the cognitive processing habits of the two student groups. Reflective observation measures the extent to which students learn by watching and doing. The mean difference on this subscale was significant (M = 30.53, SD = 8.57), t(35) = 2.18, p < .05, indicating that the face-to-face students are more reflective in comparison to their online counterparts. In addition, the face-to-face students report a higher degree of learning by thinking (abstract conceptualization) in comparison to the online students (M = 34.74, SD = 5.67), t(35) = 2.11, p < .05. Finally, significant differences were found on the active experimentation scale, which assesses the extent to which students learn by doing. In this case, the online students report greater use of this mode of learning (M = 36.11, SD = 8.46), t(35) = -2.54, p < .05.

Table 1
Independent t-test - Student Learning Style Scales (Group 1 – Face-to-face; Group 2 – Online)

Subscale	**Format**	**N**	**Mean**	**SD**	**t (dof)**	**p**
Independent	Group 1	19	37.21	3.55	0.54 (35)	0.58
	Group 2	18	36.44	4.90		
Dependent	Group 1	19	36.79	4.20	0.40 (35)	0.68
	Group 2	18	36.11	5.80		
Avoidant	Group 1	19	21.00	4.61	- 1.15 (35)	0.25
	Group 2	18	23.06	6.18		
Participant	Group 1	19	41.84	5.49	1.18 (35)	0.24
	Group 2	18	38.89	4.40		
Collaborative	Group 1	19	40.58	6.38	1.18 (35)	0.24
	Group 2	18	38.50	3.97		
Competitive	Group 1	19	22.63	5.98	- 0.46 (35)	0.64
	Group 2	18	23.67	7.40		

Table 2
Independent t-test - Learning and Study Strategies Inventory (Group 1 – Face-to-face; Group 2 – Online)

Subscale	**Format**	**N**	**Mean**	**SD**	**t (dof)**	**p**
Attitude	Group 1	18	35.00	4.97	0.00 (34)	1.00
	Group 2	18	35.00	3.45		
Motivation	Group 1	18	34.83	3.93	1.02 (34)	0.31
	Group 2	18	33.33	4.83		
Time Management	Group 1	18	30.50	6.59	1.62 (34)	0.11
	Group 2	18	26.83	6.92		
Anxiety	Group 1	18	29.89	7.55	0.92 (34)	0.36
	Group 2	18	31.72	3.69		
Concentration	Group 1	18	31.00	4.64	1.24 (34)	0.22
	Group 2	18	28.83	5.75		
Information Processing	Group 1	18	32.89	4.78	0.96 (34)	0.34
	Group 2	18	31.33	4.87		
Selecting the Main Idea	Group 1	18	21.33	2.93	0.42 (34)	0.67
	Group 2	18	20.89	3.36		
Study Aids	Group 1	18	30.17	4.76	4.10 (34)	0.00 *
	Group 2	18	23.78	4.58		
Self-Testing	Group 1	18	29.39	4.27	1.55 (34)	0.12
	Group 2	18	26.94	5.13		
Test Strategies	Group 1	18	34.56	3.81	0.23 (34)	0.81
	Group 2	18	34.22	4.53		

* *significant at alpha = 0.05 (2-tailed)*

Table 3
Independent t-test - Learning Style Inventory (Group 1 – Face-to-face; Group 2 – Online)

Subscale	Format	N	Mean	SD	t (dof)	p-val
Concrete Experience	Group 1	19	25.00	6.19	- 1.04 (35)	0.27
	Group 2	18	27.61	8.12		
Reflective Observations	Group 1	19	30.53	8.57	2.18 (35)	0.03 *
	Group 2	18	25.22	5.88		
Abstract Conceptualization	Group 1	19	34.74	5.67	2.11 (35)	0.04 *
	Group 2	18	30.44	6.67		
Active Experimentation	Group 1	19	29.16	8.15	- 2.54 (35)	0.01 *
	Group 2	18	36.11	8.46		

** significant at alpha = 0.05 (2-tailed)*

Learning Style Influence on Student Success

The primary question addressed by this study was to what extent did learning style have on student success when the delivery format was controlled. The data were analyzed by first looking at the relationships between all students and their course grade. A significant positive correlation was found between "motivation" from the task engagement construct and course grade indicating that as student motivation increased so did the course grade. Tables 4, 5, and 6 present the results of these analyses.

Table 4
Bivariate Correlations - Student Learning Style Scales (Face-to-face and online)

Subscale	N	Mean	SD	Corr coeff	p-value
Independent	37	36.84	4.22	- 0.10	0.53
Dependent	37	36.46	4.98	0.24	0.14
Avoidant	37	22.00	5.45	- 0.26	0.12
Participant	37	40.89	5.02	0.30	0.07
Collaborative	37	39.57	5.38	0.01	0.94
Competitive	37	23.14	6.64	- 0.20	0.23

Table 5
Bivariate Correlations – Learning and Study Strategies Inventory (Face-to-face and online)

Subscale	N	Mean	SD	Corr coeff	p-value
Attitude	37	34.97	4.16	0.21	0.21
Motivation	37	33.92	4.46	0.377	0.02 *
Time Management	37	28.68	6.82	0.21	0.20
Anxiety	37	30.70	5.88	0.17	0.30
Concentration	37	29.95	5.20	- 0.05	0.77
Information Processing	37	31.95	4.86	0.15	0.37
Selecting the Main Idea	37	21.08	3.04	0.04	0.80
Study Aids	37	26.95	5.55	0.07	0.64
Self Testing	37	28.00	4.85	0.23	0.16
Test Strategies	37	34.22	4.20	0.26	0.11

** significant at alpha = 0.05 (2-tailed)*

Table 6
Bivariate Correlations – Learning Style Inventory (Face-to-face and online)

Subscale	N	Mean	SD	Corr coeff	p-value
Concrete Experience	38	26.16	7.15	- 0.06	0.66
Reflective Observation	38	28.05	7.68	0.19	0.25
Abstract Conceptualization	38	32.50	6.45	- 0.16	0.31
Active Experimentation	38	32.71	8.86	- 0.03	0.84

The data were then analyzed using bivariate correlation analysis controlling for the delivery format. Examining the results for the face-to-face students, a total of five significant correlations were found. At the maintenance motivation level, as the level of avoidance of classroom activities decreased, the course grade increased. As student participation in classroom activities increased, the course grade increased. At the task engagement level, positive correlations were found between attitude and course grade as well as time management and course grade. These correlations suggest that as student attitude becomes more positive and the use of time management techniques increase, course grade will increase. Finally, one negative correlation was found for the cognitive controls construct. As abstract conceptualization (learning by thinking) decreased, the final course grade increased. This is the one finding that warrants further investigation. Results of the analyses are found in Tables 7, 8, and 9.

Table 7
Bivariate Correlations – Student Learning Style Scales (Face-to-face)

Subscale	**N**	**Mean**	**SD**	**Corr coeff**	**p-value**
Independent	19	37.21	3.55	0.15	0.51
Dependent	19	36.79	4.20	0.19	0.43
Avoidant	19	21.00	4.61	- 0.58	0.00 *
Participant	19	41.84	5.49	0.58	0.00 *
Collaborative	19	40.58	6.38	0.09	0.69
Competitive	19	22.63	5.98	- 0.00	0.99

**significant at alpha = 0.05 (2-tailed)*

Table 8
Bivariate Correlations – Learning and Study Strategies Inventory (Face-to-face)

Subscale	**N**	**Mean**	**SD**	**Corr coeff**	**p-value**
Attitude	18	35.00	4.97	0.51	0.02 *
Motivation	18	34.83	3.93	0.43	0.07
Time Management	18	30.50	6.59	0.45	0. 05 *
Anxiety	18	29.89	7.55	0.19	0.44
Concentration	18	31.00	4.64	0.07	0.78
Information Processing	18	32.89	4.78	0.43	0.07
Selecting the Main Idea	18	21.33	2.93	0.26	0.28
Study Aids	18	30.17	4.76	0.32	0.18
Self Testing	18	29.39	4.27	0.24	0.32
Test Strategies	18	34.56	3.81	0.40	0.09

**significant at alpha = 0.05 (2-tailed)*

Table 9
Bivariate Correlations – Learning Style Inventory (Face-to-face)

Subscale	**N**	**Mean**	**SD**	**Corr coeff**	**p-value**
Concrete Experience	19	25.00	6.19	- 0.25	0.29
Reflective Observation	19	30.53	8.57	0.31	0.19
Abstract Conceptualization	19	34.74	5.67	- 0.56	0.01 *
Active Experiementation	19	29.16	8.15	- 0.18	0.44

**significant at alpha = 0.05 (2-tailed)*

Finally, the results from the analyses for the online students show no significant relationships between the learning style subscales and the final course grade. These results are presented in Tables 10, 11, and 12.

Table 10
Bivariate Correlations – Student Learning Style Scales (Online)

Subscale	N	Mean	SD	Corr coeff	p-value
Independent	18	36.44	4.90	- 0.29	0.23
Dependent	18	36.11	5.80	0.29	0.24
Avoidant	18	23.06	6.18	- 0.03	0.88
Participant	18	39.89	4.40	- 0.02	0.91
Collaborative	18	38.50	3.97	- 0.10	0.68
Competitive	18	23.67	7.40	- 0.35	0.15

Table 11
Bivariate Correlations – Learning and Study Strategies Inventory (Online)

Subscale	N	Mean	SD	Corr coeff	p-value
Attitude	18	35.00	3.45	0.21	0.38
Motivation	18	33.33	4.83	0.27	0.26
Time Management	18	26.83	6.92	0.06	0.80
Anxiety	18	31.72	3.69	0.05	0.82
Concentration	18	28.83	5.75	- 0.11	0.66
Information Processing	18	31.33	4.87	- 0.22	0.37
Selecting the Main Idea	18	20.89	3.36	- 0.18	0.47
Study Aids	18	23.78	4.58	- 0.07	0.76
Self-Testing	18	26.94	5.13	0.16	0.52
Test Strategies	18	34.22	4.53	0.02	0.90

Table 12
Bivariate Correlations – Learning Style Inventory (Online)

Subscale	N	Mean	SD	Corr coeff	p-value
Concrete Experience	18	27.61	8.12	- 0.00	0.97
Reflective Observation	18	25.22	5.88	0.20	0.41
Abstract Conceptualization	18	30.44	6.67	0.04	0.85
Active Experimentation	18	36.11	8.46	- 0.19	0.43

Conclusions

While both the face-to-face and online students did not vary significantly according to age, year of Baccalaureate graduation, GPA, and experience, they did very significantly in their learning style preferences particularly at the cognitive controls level. As one would expect based on learning theory (Merriam & Caffarella, 1999), these students brought into their respective settings different ways and preferences for learning course content. Obviously, it is these types of differences that, while logical in theory, make designing courses that meet all learning style preferences challenging in practice. The results from the independent t-tests simply reaffirm the proven theory that we all learn differently. Given the differences found between the learning style preferences of these two groups, the results from the bivariate correlation analyses become even more meaningful.

First, even though there were learning style differences found between the face-to-face and online students, the differences were not highly apparent when the delivery format was controlled. Looking at the results from the correlation analysis for all students, motivation was the only variable found to influence course grade. This finding should not be surprising as theory tells us that as motivation increases so does learning (Merriam & Caffarella, 1999). While motivation tends to be an internally driven characteristic, it is also know that external factors such as the teacher, course design, and learning activities can and will influence motivation within the context of learning. The instructor of the course did emphasize this factor strongly as being a factor that greatly influences success in the course. Consequently, this may the explanation as to why there was such a high correlation for this factor. This finding reaffirms the fact that educators, regardless of delivery format, should strive to increase and maintain positive levels of student motivation.

Second, the significant results from the correlation analyses for the face-to-face students also serves to reaffirm what we know contributes to positive learning outcomes for students. As student participation increased and avoidance decreased, grades were shown to increase. Because these two variables significantly influenced student outcomes, it suggests that educators need to continually strive for ways of making learning active and participatory for students. Learning theory has shown that adults gain more from educational experiences when they can be actively engaged. Positive attitudes and increased use of time management techniques influence course grade. These too are logical findings and have been proven in the past (Merriam & Caffarella, 1999). The surprising correlation was the negative one that existed between abstract conceptualization (learning by thinking) and course grade. It may simply be that because the instructional design class is an application, hands-on course, that success is more dependent on participation. As in the case earlier, another logical explanation not only for this finding, but the others found for the face-to-face students is that these particular variables may have been more strongly emphasized in the face-to-face class and revealed themselves within the results of the learning style instruments. Although the instruments are designed to obtain an overall assessment of learning across all experiences, it should be acknowledged that students may have been thinking specifically, or at least more, about their respective instructional design courses.

Finally, what is probably the most exciting finding from this study is the fact that correlations between learning style and course grade were not found for the online students. Consequently, this finding suggests that learners can be just as successful in the online environment regardless of learning style. Granted, it does not mean that "anything goes" but that the online course must be developed well in order for learning to occur. This is true regardless of the format or content of any course. However, at a time when criticisms are still being made against the effectiveness and quality of online instruction, these findings from this study help to negate such statements.

Implications

As we have discussion previously (Johnson, Aragon, Shaik, & Palma-Rivas, in press), the ultimate question for educational research is how to optimize instructional designs to maximize learning opportunities and achievements in both online and face-to-face environments. The findings of this study show that online learning can be as effective as face-to-face learning in many respects in spite of the fact that students have different learning style preferences. In view of these findings, several implications emerge pertaining to future online program development.

First, this analysis suggests that the development and use of online programs should continue. However, it is important that quality and thoroughness of the design and delivery be the catalyst for ensuring positive online learning experiences. It is logical that if these two factors are not at the forefront of any design efforts, learning success may not occur or occur at lower levels. Second, this study suggests that that a continued understanding of adult learning theory and learning styles needs to be emphasized among faculty. This is critical if courses are going to be designed to addresses the various domains of learning. This is especially critical in the online environment where an element of creativity is needed to identify and design educational experiences that can be as active, collaborative, and participatory as those commonly found in the face-to-face environment. Finally, educational practitioners should be aware of their own learning style preferences. We believe this especially true for online learning. As has been shown, the way we learn and the way we were taught will greatly influence the ways we will teach. Knowing our strengths and weaknesses as educators helps us to know where we will be strong and weak in terms of instructional design and delivery. Related to the second point above, designing online instruction that keeps students motivated and active requires thinking outside the box. Unless we know the boundaries of our "boxes," we run the risk of not incorporating all learning preferences found in our students.

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The Impact of a Distance-Training System (DTS) with Two Distance Training Delivery Processes (DTDP) On Trainee Satisfaction and Individual Job Performance: A Case Study

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This paper will focus on the multiple regression analysis of a larger research evaluation study. Multiple regression revealed which components of a distance training system were statistically significant in influencing trainee satisfaction and performance outcomes. Implications for human resource development professionals for transfer of training and the use of distance technology in training and instructional design are discussed. Caution in the interpretation of results is important as this is a case study where generalization of findings is limited to this organization.

This paper reports the results of multiple regression analyses for a distance-training system (DTS) to determine which factors influenced trainee satisfaction and job performance. The distance training delivery process (DTDP) was of special interest to determine if it was significant. These results were part of a larger evaluation research study that examined the effects of a DTS with two distinct DTDPs on trainee satisfaction, job performance and organizational outcomes. (See Hruby-Moore (1999) in the *AHRD Proceedings* for the first part of this study.)

Introduction

A DTS is viewed as a human resource development intervention to improve organization performance (Hruby-Moore, 1997). Training, using interactive distance technology, is a recent challenge for HRD professionals. In today's changing work environment, what distance delivery process will results in trainees' satisfaction with their training experience, while providing effective individual and organizational performance outcomes? These general questions guided this exploratory, case study research. By taking a system view, the HRD professionals in this particular organization, developed a second distance training delivery process (DTDP), with videoconferencing.

The focus of this paper is on describing the differences in the two DTDPs studied and the impact of the DTS variable set on trainee satisfaction and job performance. The same basic sales training content was delivered via two different combinations of trainers, methods of instruction, media technologies, and instructional techniques for interaction. The two DTDPs varied in their instructional approaches, yet both achieved similar results in learning outcomes at the individual level. Trainee attributes, the learning context, and the amount of interaction were also measured. The two DTDPs were compared on the differences in course structure (methods, media and techniques) as one major independent variable. The theory of transactional distance (Moore, 1973; 1983) suggests course structure and dialog (interaction) are the two variables that can be manipulated to produce effective training outcomes. Figure 1 shows the independent variable set (trainee attributes, trainee interaction, trainer, training context, and delivery process) and the dependent variables (trainee satisfaction, job performance and retention) viewed from a systems approach, to include inputs, processes, and outcomes of the DTS. Dialog was measured by the number of hours of trainee's interaction with their manager and/or corporate instructor and structure was defined by the type of DTDP. Other variables identify factors cited as influencing trainee satisfaction and performance.

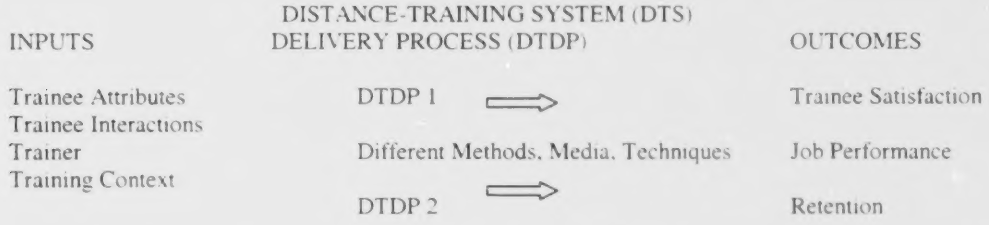

Figure 1: Conceptual Model of a Distance-training System (based on Hruby-Moore, 1997)

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Review of Literature and Theoretical Framework

Human resource development (HRD) is concerned with improving an organization's performance by developing the capabilities of its people and processes (Jacobs, 1990; Swanson, 1996). Training is one area of HRD that is focused specifically on developing employees' knowledge and skills related to a job. Training effectiveness is a major issue for human resource development (HRD) professionals. Effectiveness is defined by Rumble (1986) as "the extent an organization produces outputs that are relevant to the needs and demands of its clients" (p. 211). If a systems approach is used in the training design, and all the criteria of effectiveness are met, then distance training can be effective. A DTS as a conceptual model can guide the development of effective training in an organizational setting. A DTS was defined by Hruby-Moore (1997) as a:

> set of interrelated inputs (trainer, trainees, content, learning objectives, instructional design, communications media and management/administrative sub-systems) all of which work together in a training delivery process that results in a training outcome that leads to a performance goal. Coordination among the inputs is necessary to achieve planned learning objectives. The entire system uses feedback and situation context variables to determine if performance on the job has been achieved. (p. 281)

Within the organizational setting, each of the distance-training inputs results in an instructional delivery process to achieve the desired organizational outcomes. Some HRD researchers suggest that effectiveness is achieved when transfer of training to the job occurs (Baldwin & Ford, 1988; Rouiller & Goldstein, 1993). One of the most effective approaches to transfer of training outcomes is through on-the-job training since the training takes place in the actual environment where the job is performed. A systematic approach to on-the-job training has been developed by Jacobs and Jones (1995) and is referred to as structured on-the-job training. Structured on-the-job training or S-OJT (Jacobs & Jones, 1995) is a planned process of developing task-level expertise by having an experienced employee train a novice employee at or near the actual work setting. This planned approach to training can use a variety of methods, media and instructional techniques to create an environment for learning job related skills at a distance. For example, this study utilized S-OJT using two different training delivery approaches.

Distance Training Delivery Process (DTDP) as an Instructional Training Approach

The distance-training delivery process (DTDP) describes the instructional approach used in a DTS. An instructional approach refers to how the training course is designed and structured for delivery. The delivery process is concerned with how the trainee will interact with the training content to be learned. The instructional design decisions of what methods, media, and techniques will be used to communicate training content are seen in the actual delivery of the training. Method specifically refers to how learners are organized, usually as individual, small groups, or large audiences (Cyrs, 1997). Media refers to the devices, instruments, or technologies (hardware and software) that support the delivery of instruction (Cyrs, 1997). Instructional techniques refer to ways of organizing the interaction of learners with either the content, trainer, or other learners (Verner, 1962). According to a review by Clark (1994), many instructional designers argue it is the techniques, which cause human interaction, that are the essential component in the learning process. Often little attention is paid to interaction techniques. Techniques for interaction are often lacking in the poor designs of distance education (Clark, 1994). Clark (1994) suggests that together, the learners, instructional methods, delivery media, and techniques all have important influences on the cost and speed of learning, not just the technology. This study explores the instructional approach referred to as the DTDP. The DTDP may have implications for designing effective distance-training systems.

In terms of media, the variety of technology options available for instructional design of training is of growing interest to human resource professionals (Wagner, 1998). Often training professionals are concerned with improving training effectiveness as well as efficiency. Distance training is of special of interest to organizations as an economical use of technology to deliver its company's training packages. However, there is much controversy in the field of instructional design as to whether media really matters. The major issue with respect to distance technologies are their ability to allow for interactive techniques, and thus effective outcomes (Garrison, 1989).

Effectiveness research in distance education was found in a variety of education, instructional technology, communication, and management publications. Overall, studies conducted in educational settings over the last 45 years suggest that for groups of learners, there are no significant differences between the traditional face-to-face method of instruction and a variety of distance instructional methods on both satisfaction and learning outcomes (Russell, 1997). The problem is that most of these studies focus on just the method, media, or interaction techniques separately from the whole distance delivery process. For example, Hunter (1995) states that research he reviewed "consistently shows training using videoconferencing is at least as effective as classroom training" (p. 81). Videoconferencing is a technology and classroom training is a group method. The techniques used for creating interaction are not discussed. Since videoconferencing and other information technologies now allow for more types of interaction and two-way communication, it is important to analyze the whole delivery process in the learning transaction (Garrison, 1989). If the technology alone does not influence outcomes, does the delivery process as a whole, including media, methods, and instructional techniques, effect training satisfaction and performance?

Course Structure, Technology, and Interactivity

Moore (1973; 1983) in his theory of transactional distance identifies course structure and dialog as the two instructional variables that can be manipulated to achieve effective learning outcomes. Moore suggests these two variables can be manipulated to reduce the amount of psychological distance between a learner and the instructor when engaged in a distance learning-teaching process sharing a common interest in some content. Distance technology, as a medium, is either used to increase or decrease the amount of structure and dialog in the teaching-learning transaction. This review is consistent with Clarke (1994) who suggests that media is not the issue, but the instructional techniques and the teacher-learner interaction. In the instructional design process of an education or training program, these variables are both influenced by the technology or medium used in the delivery process.

Course structure (Moore & Kearsley, 1996) refers to the course design variables that consist of elements of method and techniques. Course structure includes learning objectives, content themes, information presentation, case studies, pictures, illustrations, exercises, project, activities, and tests. In instructional system design, learning objectives are converted into methods and instructional technique and matched with the appropriate technology or media to bring about the desired learning and performance outcomes (Cyrs, 1997).

Dialog referred to by Moore and Kearsley (1996), is any interplay of words, actions, and ideas between the teacher and the learner when one gives instruction and the other responds. Dialog is the interaction or active participation in the training process. Wagner (1998) suggests that performance improvement specialists should look at the outcomes of interactions: Do they change the learner and move them toward action to the stated goal? Interaction is measured in this study by the total number of hours recorded by the trainee based on their interaction with their manager and/or the corporate instructor throughout their training. Research literature in cognitive and perceptual psychology supports the importance of interaction in learning (Neisser, 1976; Gardner, 1985).

Technology refers to any type of media that facilitate the process of instruction over distance of time or space. Further focus is given in this case to videotape and videoconferencing as they relate to this study. The defining characteristics of these two distance technologies or media, is their ability to facilitate real time interaction or dialog. A non-interactive, asynchronous distance technology like video-tape, is different from an interactive, synchronous distance technology such as videoconferencing. There are four major categories of distance technology delivery systems and numerous combinations to achieve course structure and dialog appropriate to meet the learning objectives. Delivery systems with distance technologies defined by Cyrs (1997) are shown in Table 1.

Table 1
Distance delivery systems with technology, from Cyrs (1997)

Delivery system	Technology/tools used in distance delivery systems
Print	Books, correspondence course, handouts, study guides, and workbooks
Audio	Radio, short-wave, telephone (wired and wireless), compact disc (CD), telephone conferencing, voice mail
Video	Videoconferencing, one-way television/two-way audio, two-way television/two-way audio, videotape, videodisc, compact disk (CD), broadcast television, compressed television, microwave, instructional television fixed service (ITFS), satellite television, and desktop video
Computing	Computer conferencing, e-mail, the Internet, multi-media, the World Wide Web, bulletin board, listserv, and fax

Garrison (1989) proposed a model or taxonomy of distance technologies as four generations of delivery systems. The capability of the technology increasingly enhances the immediacy of interaction and feedback as the generation of the delivery system increases. Table 2 shows the progression of the four generations (Garrison, 1989) and the technologies used in them.

Table 2
Four Generations of Distance Delivery Systems, from Garrison (1989)

Type of Distance Delivery System	Primary Type of Technology Used
Generation One: Individual, Correspondence Study	Print
Generation Two: Individual/Group Teleconference	Audio, Graphic, and Video-conferencing Systems
Generation Three: Individual, Computer Based Instruction	Computer Hardware and Software
Generation Four: Individual/Group, Combination Methods	Interactive Multimedia

Based on the training objectives to be accomplished, the need for interaction can be designed into the course structure and matched to the appropriate selection of technology. According to Garrison (1989), the procedures to overcome the physical and psychological distance are instructional design and interaction procedures, since the "gap" is pedagogical, not geographic. Because the physical distance contributes to a communication gap, the result is a psychological space of potential misunderstandings between the behaviors of the instructor and the learners (Moore, 1973;1983).

Combinations of distance technologies can take advantage of the synchronous (two-way) or asynchronous (one-way) nature of the communication. Each distance delivery system has its own advantages and disadvantages in terms of cost, degree of student control, degree of student and instructor interaction, flexibility, amount of instructor training required, ease or complexity of use and operation, amount and type of maintenance required, and portability (Garrison, 1989). Videotape and videoconferencing are two particular technologies that can be distinguished by these characteristics and especially by their ability to promote interaction between the student and teacher.

Course structure and dialog are both important for engaging the learner in the learning process. Course structure can cause written interactivity with the content. Dialog causes verbal interaction with the instructor or other students. The technology is important as it allows for either course structure or dialog to occur either through print, video, graphics or interactive multimedia. Moore and Kearsley (1996) in their extensive research concluded that two-way distance education systems that allow for high levels of interaction and learner control, have been found to best meet the instructional needs of adult learners. But do these variables also matter to trainees' satisfaction and performance?

Research Method and Design

The research method is classified as a case study using partnership research approach (Jacobs, 1996;1997). Partnership research is a method used by HRD scholars to improve practice through research. A one shot case study, using a static group comparison research design, was appropriate for studying this situation in a field setting. Static group comparison is considered a pre-experimental research design (Campbell & Stanley, 1963). Caution should be used in interpreting the findings since there was no ability to manipulate the DTS treatment or to experimentally control for extraneous variables in the setting.

The major independent variable was the distance training systems (DTS) composed of several variables that differed in trainee attributes (age, gender, cognitive style, education, and experience - specified as work, sales, industry cognitive style), two distinct DTDPs (methods, media, and techniques), different trainers, training context, and work environment. Again, the primary focus of this study was on the two levels of the DTDP. DTDP 1 is described as a 30 module self-paced, self-instructional sales training program using print and videotapes facilitated on-site by the trainee's manager. DTDP 1 uses an individual method with a variety of interaction techniques. DTDP 2 is described as a group method of training with some self-instruction. DTDP 2 is a scheduled 3 week, 30 module sales training program using a corporate trainer to instruct new sales associates located in multiple office locations via two-way interactive videoconferencing, print and videotape. The sales training content was essentially the same. Table 3 outlines the distinctions based on method, media, instructional techniques and trainers.

Table 3
Method, Distance Technologies/Media, Training Techniques, and Trainer Influence

Distance Training Delivery Process Variables	Distance Training Delivery Process One (DTDP1)	Distance Training Delivery Process Two (DTDP2)
Method	Self-paced tutorial, with manager as facilitator in role play.	Group method, corporate instructor led with manager as facilitator in role play.
Weston & Cranton (1986) Method classification	Individualized with some experiential method	Interactive method
Distance technologies (Media) used in Delivery system	Manager as facilitator Print Videotape Computer	Corporate trainer w/Mgr. Support Print Videotape Computer Videoconferencing
Garrison (1989) distance delivery system Classification	Generation One – Print	Generation Four – Multimedia
Training instructional techniques influencing course structure and interaction	Introduction by manager Self evaluation exercises Flexible review and Feedback from manager Role play with manager Unstructured discussions With trainee & manager	Corporate Instructor directed Lecture Self evaluation exercises Scheduled excercises and Feedback from instructor Role plays with instructor Role plays with manager Structured discussion with Trainees & instructor Structured Q&A sessions Unstructured opportunities for trainees to interact
Trainer	Trainee with Manager	Corporate Trainer and Trainee with Manager

The two dependent variables of interest for the multiple regression analysis were trainee satisfaction score and job performance. The trainee evaluation was used to measure satisfaction. Job performance was sales made and measured by trainees' total number of placements reported by the manager.

Instrumentation

Instrumentation procedures included both reliability and validity. First, a pilot test for the reliability of the evaluation instrument was conducted that measured trainee satisfaction with a score. Internal consistency reliability on the evaluation instrument was calculated at alpha equal .86 on an independent sample of 100 trainee responses. A survey for demographic data was developed by the researcher with a panel of experts in April, 1999. In May, a field test was conducted with 20 trainees to review the demographic survey instrument and the instructions for the the Group Embedded Figures Test (GEFT) (Witkin, Oltman, Raskin, Karp, 1971). Based on the 18 responses returned, several changes were made to improve the demographic survey. Instructions for the GEFT were provided to managers. Cognitive style was measured by. Witkin & Goodenough (1981) and GEFT Test Manual reported an alpha equal .82 (Consulting Psychologists Press, 1971). The Ohio State University (OSU) Human Subjects approved the study provided each manager was contacted to request trainees' permission. A letter, instructions, pencil, instruments, and return envelope were sent to managers who agreed to participate. Phone calls to managers for their participation in the study were made during June-October 1998 as data was being collected.

Two naturally occurring groups of trainees existed based on the two DTDPs at participating field office locations. Participants trained in the first half of 1997 were the population selected for the study. There were 78 out of 119 trainees in the self-paced training and 136 out of 408 trained in the corporate instructor-led system that actually participated in this study. Those that left the company were not considered in this study.

Research Question

A major issue in this research study was which DTDP was more effective in achieving trainee satisfaction and performance outcomes defined by the individual level? Results reported at the last AHRD conference suggested no significant difference in training satisfaction, learning, or individual performance outcomes based on the two DTDP groups (Hruby-Moore, 1999). However, a secondary question was: holding all variables constant in the DTS, which ones impacted trainee satisfaction and job performance? The research question guiding this part of the study was: *What portion of the variance in training satisfaction and performance can be explained by the independent variable set that defines a distance training system? Was DTDP significant in the DTS enough to impact trainee satisfaction or performance?* Multiple regression analysis was the statistical procedure used to answer this question.

Results

For these research questions, multiple regression analysis was run using SPSS version 7.5. The DTS dependent variables of training satisfaction and total placements were regressed on the independent variable set (DTDP, GEFT, number years of: sales, general work, and industry specific experience, education, number hours of interaction, gender, type of trainer, trainees' perception of their manager's involvement in their training, and work environment). Independent variables were dummy coded (see note after Table 5 for coding). Regression analysis determines the amount of variance explained in the dependent variable by the independent variable set.

Tables 4 and 5 show the results of the regression analysis to be significant at the .01 level. Results for both equations also suggest an R squared of .20 meaning 20% of the variance in both trainee satisfaction and number of placements could be explained by the DTS independent variable set. The DTS variables are those identified in the training system as: DTDP (1 and 2), trainer (self/manager vs. corporate trainer), trainee (cognitive style, age, years of work experience, sales experience, industry experience, education, gender), manager involvement (yes or no), and work environment (unstructured with focus on team/office results = 0; unstructured/individual results = dummy 1; structured/team results = Dummy 2; structured/individual results = dummy 3).

In Table 4, the number of years of work experience and manager involvement from the perspective of the trainee, were the two most significant variables influencing trainees' satisfaction score at the .05 level.

Table 4
Regression of Trainee Satisfaction Score on the DTS Independent Variable Set

Independent Variable	b	Standard Error	Beta	Significance
DTDP	3.69	2.29	.17	.11
GEFT Score	-0.25	0.19	-.11	.19
Work Experience	0.52	0.12	.45	.01*
Sales Experience	-0.20	0.17	-.14	.23
Industry Experience	-8.82	0.24	-.04	.71
Education	-0.36	0.38	-.08	.35
Interaction (dialog)	-2.01	0.04	-.05	.57
Gender	3.83	2.02	.17	.06
Trainer	-1.53	1.50	-.09	.31
Manager Involvement	13.78	3.92	.30	.01*
Work Environment	0.23	0.93	.02	.81
Dummy 1	Excluded by SPSS			
Dummy 2	-.18	2.47	-.01	.92
Dummy 3	.14	2.45	.01	.95

R = .450 R Squared = .20 F = 2.73 Sig = .002*

Standard Error of the Estimate = 10.19 Durbin-Watson = 1.89

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In Table 5, the number of years of sales experience, the trainee's perception of their manager's involvement, and the work environment (an unstructured environment with a focus on team results and a structured work environment with focus on individual results) were the independent variables influencing job performance as the number of placements. These variables were statistically significant at .05.

Table 5
Regression of the Number of Placements on the DTS Independent Variable Set

Independent Variable	b	Standard Error	Beta	Significance
DTDP	.31	1.18	.03	.80
GEFT Score	-3.40	0.10	-.03	.73
Work Experience	-0.12	0.06	-.19	.06
Sales Experience	0.18	0.09	.25	.03*
Industry Experience	-7.11	0.12	-.06	.57
Education	-7.15	0.20	-.03	.71
Interaction (dialog)	-1.14	0.02	-.05	.54
Gender	8.98	1.05	.01	.93
Trainer	0.34	0.78	.04	.66
Manager Involvement	5.04	2.04	.21	.01*
Work Environment	1.24	0.48	.24	.01*
Dummy 1	Excluded by SPSS			
Dummy 2	.67	1.28	.05	.60
Dummy 3	-2.85	1.27	-.22	.03*
R = .449	R Squared = .20	F = 2.718		Sig. = .002*
Standard Error of the Estimate = 5.29		Durbin-Watson = 1.931		

Note: Dummy Coding for the following variables for both Table 4 and 5:
DTDP: Self-Instructional Modules = 0; Group-Videoconferencing = 1; Gender: Male = 0; Female = 1
Trainer: Self/Manager Facilitator = 0; Corporate Instructor = 1; Manager Involvement: No = 0; Yes = 1
Work Environment: Unstructured with focus on Team(Office) Results = 0; Unstructured with Focus on Individual Results = Dummy 1; Structured w/ Focus on Team (Office) Results = Dummy 2; Structured w/ Focus on Individual Results = Dummy 3

Conclusion

Multiple regression analysis indicated that when all DTS independent variable are considered as a set, 20% of the variance in both trainee satisfaction scores and the number of placements could be explained. Examination of this regression output suggests that DTDP was not a significant contributor to either trainee satisfaction score or placements. This finding supports the growing "no significant difference phenomenon" literature in distance education recently updated by Russell (1999). However, partial regression coefficients suggest that work experience and manager involvement were statically significant in predicting trainee satisfaction. Likewise, sales experience, manager involvement, and work environment were statistically significant in predicting the number of placements. These variables should be explored further in light of the transfer of training, human resource development, and performance literatures. Caution in the interpretation of results is limited to this data as this is a case study.

Further Research and Implications for HRD

Effectiveness of the DTS as a whole was achieved regardless of distance training delivery process (DTDP) or amount of interaction identified respectfully as course structure and dialog. However, when an instructional systems approach to training is utilized in the delivery, individual training satisfaction and performance objectives were achieved. This study does suggests that method, media, and instructional techniques are not critical in predicting overall trainee satisfaction or job performance per se, even though they may be important in learning outcomes. Analyzing the DTS as a whole, does raise new questions. For example, why and how do the number years of work experience and trainee's perception of their manager's involvement influence trainee satisfaction score. Likewise, sales experience, trainee's perception of their manager's involvement, and work environment were significant in explaining the number of placements made. The trainee's perception of the manager's involvement was important in both of these dependent variable outcomes which supports the coaching literature. In terms of job performance, the work environment should also be explored further. What is it about the work environment structure of practices and procedures along with a focus on individual or group results that support job performance? HRD practitioners and researchers can understand how other variables do influence trainee satisfaction and job performance in a workplace setting by analyzing the DTS in this case study. However, this DTS only explained 20% of the variance in satisfaction and performance. What other variables need to be identified?

The development of distance technologies spurred by the Internet and videoconferencing are taking off (Imel, 1998). Weinstein (1997) suggests that the appeal of these technologies is the interactivity of the teacher and students and their ability to share text, graphics, audio, video, and virtual reality experiences despite physical separation. This study showed no significant difference in the mean hours of interaction; however, the variability suggests some learners need more interaction than others. Technology, interactivity and course structure for developers of training should be considered together to produce effective outcomes. However, future studies may want to separate out each of these variables. Finally, this study does offer HRD professionals and researchers an account of a DTS. It also provides a starting point to help HRD professionals decide which combinations of trainees, instructional design variables (methods, media, and techniques), trainer, content, training context, and work environment will bring about trainee satisfaction and performance, in addition to learning outcomes.

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Constructing Knowledge in Continuing Professional Education

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This qualitative interpretivist study analyzed the interrelationships between professional practice, the knowledge gained in continuing professional education programs, and the context of employment. Sixty semi-structured, tape-recorded interviews were conducted with social workers, lawyers, and nurses who had attended continuing education programs nine-24 months previously. Findings indicate that professionals construct a knowledge base by moving back and forth between continuing professional education programs and their professional practice. This process of knowledge construction was affected by elements of the structural, human resources, political and symbolic frames of the contexts in which professionals were employed. Implications for further research in continuing professional education are drawn.

Keywords: Continuing Professional Education, Constructivist Learning, Transformative learning

The intricate, elaborate, and dynamic relationship among learning, context, and professional work is one that has recently begun to be explored from a new perspective. Research in the transfer of knowledge (Broad & Newstron, 1992), adoption of innovation (Hall & Loucks, 1981; Lockyer, 1991), and diffusion of innovation (Rogers, 1995) has laid the groundwork for the study of learning and context. However, in these frameworks, research questions have asked how does knowledge learned in one location get transferred or applied in a different location. The complexities inherent in the transfer process have led researchers to attempt to simplify their studies by looking at transfer, adoption, and application as linear, one-way processes of translating information into professional practice.

More recently however, researchers and program planners (Black & Schell, 1995; Eraut,1994; Gray-Murray, 1994; Grzyb, 1997; Kozlowski, 1995) have begun to understand that professionals engage in a more interactive process with the context of their practice and tend to combine elements of the context, information from continuing education, and experience in practice to construct their own individual knowledge base, rather than to follow a simple transfer process. Even though researchers have begun to question the relationships between knowledge presented in continuing education programs (CPE) and the use of that knowledge at the work site, the missing element is still a comprehensive, holistic assessment of the interrelationships between the learner, the knowledge generated within the educational program, the components of professional practice, and the context of organizations in which professional are employed.

The purpose of this paper is to describe a research study that emanated from questions raised about the value of CPE programs. The use of knowledge in professional practice is an important issue within the field of adult education because billions of dollars are spent on CPE programs without a clear understanding of the outcomes of the learning or the connections between learning and the context of practice.

Theoretical Framework

The interrelationships of three major concepts; knowledge, context, and professional practice were explored in this study. Knowledge, for the purpose of this study, was viewed as a social construction of information that occurred through a process of constructivist learning and perspective transformation. Merriam and Caffarella (1999) have defined constructivism as a collection of theoretical perspectives that includes both constructivist learning theories and transformative learning theories. They indicate that constructivist perspectives are about making meaning.

Constructivist's (Ausubel, 1986, 1978; Brunner, 1990; Dewey, 1938; Novak, 1998; Novak & Gowin, 1984; Piaget, 1971) believe that individuals create knowledge by linking new information with past experiences. Within a constructivist framework, the learner progressively differentiates concepts into more and more complex understandings and also reconciles abstract understanding with concepts garnered from previous experience. New knowledge is made meaningful by the ways in which the learner establishes connections among knowledge learned, previous experiences, and the context in which the learner finds themselves. Lambert and others (1995) identify multiple principles of

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constructivist learning theory. These principles include the following major points: (1) knowledge and beliefs are formed within the learner, (2) learners personally imbue experiences with meaning, (3) learning activities should cause learners to gain access to their experiences, knowledge and beliefs, (4) learning is a social activity that is enhanced by shared inquiry, and (5) reflection and meta-cognition are essential aspects of constructing knowledge and meaning (p. 17-18). Thus, constructivists believe that learning is a process of probing deeply the meaning of experiences in our lives and developing an understanding of how these experience shape understanding. Within a constructivist framework, learning activities are designed to foster an integration of thinking, feeling and acting while helping participants to learn how to learn (Novak & Gowin, 1984).

Learning in the context of professional practice is also informed by the growing body of work in the area of situated cognition (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Wilson, 1993). Situated cognition can be conceptualized as having four interrelated learning aspects: (1) learning that is situated in the context of authentic practice, (2) transfer limited to similar situations, (3) learning as a social phenomenon, and (4) learning that relies on use of prior knowledge (Black & Schell, 1995). In this view, the authentic "activity in which knowledge is developed and deployed ... is not separable from, or ancillary to, learning and cognition. Nor is it neutral. Rather, it is an integral part of what is learned" (Brown et al., 1989, p. 32). According to Wilson (1993),

> Learning is thus an everyday event that is social in nature because it occurs with other people; it is 'tool dependent' because the setting provides mechanisms (computers, maps, measuring cups) that aid and, more important, structure the cognitive process; and, finally, it is the interaction with the setting itself in relation to its social and tool-dependent nature that determines the learning (p. 73).

Lave (1991) has indicated that authentic activity and tools within the context of use helped foster the construction of knowledge.

Transformative learning (Mezirow, 1981, 1990, 1991, 1994, 1997) expands our understanding of constructing knowledge by defining learning as a critically reflective process where the learner ultimately reflects on assumptions that frame previous understandings and determines whether those assumptions are still valid in the learner's present situation. Adults learn within this framework by adding to old meaning schemes, acquiring new meaning schemes, transforming meaning schemes, or transforming perspectives. According to Mezirow (1997), "a significant personal transformation involving subjective reframing, that is, transforming one's own frame of reference, often occurs in response to a disorienting dilemma through a three-part process: critical reflection on one's own assumption, discourse to validate the critically reflective insight, and action" (p. 60).

The issues in the relationship of context to professional practice are particularly important in today's environment because professionals are often considered employees of organizations rather than free, autonomous decision-makers (McGuire, 1993). Grzyb et al. (1997) point out that these changing conditions necessitate a deeper understanding of organizational professions, the impact of bureaucracy, and changing organizational dynamics on professional work. Cervero (1985) included the identification of the social system (context) as a variable with impact on the outcome of continuing education programs. "This may be the most powerful, yet overlooked, variable in analyzing the effectiveness of continuing professional education" (p. 87).

To provide a framework for examining the context of professional practice, Bolman and Deal's (1997, 1991) framework was selected. Bolman and Deal (1997) demonstrated that organizations can be viewed through four different lenses or frames, including the structural, human resources, political, and symbolic frame. The structural frame draws on concepts from sociology and emphasizes formal roles, defined relationships, and structures that fit the organizational environment and technology. Within the human resources frame it is believed that organizations have individuals with needs and feelings that must be taken into account so that individuals can learn, grow, and change. The political frame analyzes the organization as groups competing for power and resources. The tools of this frame are bargaining, negotiation, coercion, and compromise. Finally, the symbolic frame (similar to organizational culture) abandons rationality and sees organizations as tribes with cultures propelled by ceremonies, stories, heroes, and myths. Bolman and Deal (1991, 1997) believe that organizations can be understood, analyzed and changed by using different lens and/or frames as ways to approach organizational issues. This framework was selected for the research reported here, because it provides different lens by which the researchers can examine and analyze the context in which professionals conduct their practice. The framework also provides a method by which the researchers can compare and contrast the impact of context on different professional groups.

Research Questions

The following research questions were advanced to guide this inquiry.

1. What makes knowledge meaningful in the context of professional practice?
2. How is the construction of knowledge affected by the different frames (structural, political, human relations, symbolic) of the context in which professionals practice?

Methodology

To analyze the above research questions, individuals from three different professions were interviewed 9-24 months following their attendance at a CPE program. A purposive sample (Patton, 1990) of 20 social workers, 20 lawyers, and 20 nurses was recruited. Professionals ranged in age from 22-60, and had between 1 and 20 years of experience in their professions.

Data Collection Data in this study were collected through semi-structured interviews and document analysis. Following human subjects approval, data were collected from participants who had attended a one or two day CPE program on topics that were pertinent to their particular profession. Prior to completing the tape-recorded interviews, the researchers conducted a document review of the continuing education planning information that specified the program objectives, content, time frames, and evaluation strategies of each CPE program from which study participants were drawn. Participants were then questioned to determine what they had learned or not learned, how they incorporated or not incorporated that information into their practice, and what aspects of their practice (clinical cases) they determined to be significant in fostering their learning. Participants were also questioned about the context of their practice including, the organizational structure, human resources, politics, and culture. Ten of the 60 interviews in this study were completed over the telephone, but the majority of interviews were conducted in a face to face meeting between the researchers and participants.

Data Analysis Verbatim transcripts were created from the tape-recorded interviews. Subsequently, three data analysis strategies were employed. First, the researchers created a concept map (Novak, 1998) that depicted the connections the study participant described among learning, context, and professional practice. The maps were used to assist the researchers in tracing the interrelationships between the concepts under study. The maps created were returned to study participants for their review. Study participants were asked to determine if the maps accurately represented the meaning they portrayed in the interview. Second, a category system was created and all data were coded within categories. The categories were used to identify thematic areas articulated by participants. Third, a system of matrices (Miles & Huberman, 1994) was created to examine what different groups of participants expressed about each of the research questions under study. The combination of these three data analysis strategies allowed the researchers to examine connections between concepts under study, to compare and contrast different groups in the sample, and to examine both individual and group findings related to the different research questions.

Quality Control Two quality control mechanisms were employed in this study. First, member checks were employed during the interview process and the study participants reviewed the concept map created from their interview for accuracy and completeness. Second, two qualitative researchers are currently completing a qualitative data analysis audit to review the study for dependability and confirmability (Lincoln & Guba, 1985). Preliminary findings from the audit indicated that the methodological decisions (dependability) made during the process of the study were sound and that the study findings were confirmable in the data.

Results

Knowledge and Professional Practice Study results indicate that professionals who attended CPE programs used this new information to continually construct and reconstruct their knowledge base. Professionals in this study did not see transfer of learning as an outcome, but rather transfer was viewed as an integral part of the knowledge construction process. The new information learned in CPE programs was added to a professional's knowledge base through a complex process of thinking about the new information, acting on the new information and identifying their feelings about the information. It was through this process that knowledge from CPE became meaningful.

Each profession described the process used to construct knowledge differently.

Social workers framed their understanding and construction of knowledge from CPE programs through their advocacy role. Social workers described themselves as "stewards" of the information and explained how they actively sought our ways they could help their clients by using information learned in CPE.

> *I went to that session thinking about the future more and wanting to know what was going to be happening with the social work profession in the near future especially . . . with the W2. I guess it was a broader thing, a more political interest that I had, how could I use what I learned to help defend my clients needs in the system.*

Lawyers, on the other hand, tended to develop their own systems to construct knowledge. Lawyers saw CPE as providing a "road map" for their practice. During attendance at a CPE program, lawyers would often create their own individual ways to link new legal information to the cases on which they were currently working by developing note taking or filing systems. For example, one lawyer indicated:

> *I had represented a guy who had custody of his children but he owed support from 16 years ago. I tried to get the amount reduced because he had his kids, but he still owed it to the welfare department from his wife having the kids when they were one and two years old. And now the kids are 20 and 21,. . . I heard something in the seminar that made me think there is some ammunition here that I could use in a motion for the court to reconsider. So I jotted that down and made sure to include it in his file and used it when I filed the motion.*

Lawyers also indicated that their understanding of how they constructed knowledge changed as their practice developed. Lawyers indicated that they moved to a much more active incorporation of information into their knowledge base as they gained experience in their profession.

> *When I first started taking CLE programs 19 years ago, they weren't much use to me because I didn't know what to do with them. I was a young lawyer and I needed credits and somebody said you really ought to go to this seminar with me and that was great, but I wasn't that integrated into child practice or real estate law which were my things at that point. So not having had a background where I discovered the need for some of this information, I didn't know what to do with the information. It was only as a more established lawyer that I really understood what I wanted and really needed and would try to go out and get it.*

Finally, nurses described how they linked client needs, with new information from CPE so that the entire knowledge base became integrated. This knowledge base functioned more like a web of information that nurses would draw on when presented with new clients. Consider the nurse who describes this process as follows.

> *I mean I can't really say what helps me dealt with what. I think of it more like creating mosaics. I mean, you have all these little pieces that come from all over and in and of themselves they don't mean much, but when you put them together you have a beautiful picture. Continuing education and client care are more like that for me. I take little pieces of what I learn from many places and put them together until I have my own picture.*

In summary, each profession indicated that knowledge became meaningful through a process they used to link the information with their practice. Because of their advocacy role social workers saw themselves as stewards of information, conversely, nurses saw themselves as creating mosaics, and lawyers described the CPE process as a road map for their practice.

As indicated previously, constructivist learning theory can help us understand how professionals acquire knowledge, how they make use of their experiences and how they learn through their practice. But the results of this study indicated that, there is another level of learning that goes beyond what we can understand from constructivist frameworks. Professionals described how they learned topics in educational programs only to have their ideas on those topics changed in the context of practice. Often, it was an emotional encounter with a client that changed a professional's practice. In other words, these encounters were as important in transforming professionals' perspectives as was the knowledge acquired in CPE courses.

For example, a nurse in this study described how she saw herself as a relatively good communicator. She had learned communication theory in her basic prepatory program, reviewed it in CPE programs and practiced the skill with her clients while doing assessments, interviews and treatments. When she worked with a client who was dying, however, this client taught her what it meant to communicate. Her understanding of communication shifted from saying the right thing, to being available on the client's terms.

> *My assumption was that if I said the right words, I was communicating well. After this experience I recognized that I was basing my actions on a view of communication that was not really accurate in my practice. I now believe that communication is about presence, caring and time, not just words.*

In this example, the professional learned by constructing an understanding of the concept of communication and by changing her perspective and assumptions about what communication meant following a significant practice experience.

In another example, a social worker described how her understanding of resistance in working with involuntary clients changed her views on the connections between social work and politics. She indicated that her basic education "labeled people as resistant." She explained the impact of her practice on this perspective:

> *When somebody comes to you with a problem, I learned that you don't have to spend as much time fixing that person as you do fixing the things around them in the environment. If you listen, you know it is not so much resistance; but it's racism, it's poverty. I learned to reconceptualize resistance and focus not so much on the individual in a therapeutic sense, but to focus on the system, and to be an advocate at the system level.*

This social worker indicated that she had constructed a new meaning of the concept of resistance through her practice and that she had transformed her perspective so that her interventions with clients were on a much broader level.

Finally, a lawyer in this study indicated how his views on dealing with divorce cases had changed. He indicated that during his initial education process he had learned to be very aggressive in assuring financial security for his clients. He explained that after dealing with many divorce cases his perspective changed.

> *When I first started practicing, I would become very aggressive in divorce cases about dividing up assets. That was what I learned, I made sure that I evaluated assets to maximize my clients side of the ledger and I made sure they were divided in such a way that my client would get absolute top dollar and I would fight very forcefully and aggressively to do that. When I look at things now, after dealing with many cases, I think it is important that people get the dollar amount that they should, but I think there are other aspects that come into play also, like a continuing good relationship between the husband and wife if it is possible to preserve that. Not thinking that the dollar is the end all and be all, and that there are other more important things rather than getting the most possible money out of a given situation such as preserving relationships, such as continuing good relationships with the children, such as peace of mind, such as not spending a great deal of money on attorney fees. . . such as avoiding a trial and the trauma and the bad relationship that can carry over for years and years and years between parties.*

This lawyer indicated that he had constructed a new understanding of divorce outcomes and shifted his practice from a focus on the financial aspects, to a focus on the human aspects of the process. Thus, a major component of how knowledge becomes meaningful in professional practice is determined by how the professionals' perspectives change following client interactions.

Context The complex process of knowledge construction and transformation described in the previous section of this paper, occurred in a particular practice context as well. So not only did the content of the CPE program, and the professional practice shape the construction of knowledge but the context in which professionals worked added another level of complexity to the process.

Overall, the main difference study participants described in the context of their practice related to the level of autonomy and independence they possessed as professionals, or the extent to which their practice was housed within a bureaucratic system. The practice of nurses tended to be housed mostly in bureaucratic health care systems where structure and politics impacted the professional work in which the nurse engaged. The practice of social workers was either housed in governmental agencies, where both macro and micro political issues impacted the work of these professionals, or social workers practiced independently as therapists and thus, had a greater degree of autonomy. Lawyers, for the most part, appeared to be the profession in this study that demonstrated the most autonomy and independence. Whether lawyers were working in large firms or small firms, there seemed to be less impact of the context on their professional practice. Each professional interviewed, for this study, was asked to explain specifically how the structural, human resources, political and symbolic frames of the context of their work environment impacted knowledge development.

Structural frame. Each of the three professions, lawyers, nurses and social workers described the impact of the structural frame in a unique way. Lawyers, for the most part indicated that the structural frame had little impact on their use of knowledge. Lawyers indicated that because of the autonomous nature of their practice, if they learned new information that they wanted to use with a client they did so with very little concern about the structure of the firm. Nurses, on the other hand described the structure of their organizations as a "hurdle", and indicated that to use new information in their practice they often had to find creative ways to go around the organizational structure. For example, nurses indicated how they often had to "break rules" to make sure their client's needs were met. Social workers seemed to feel that the use of new information that would benefit their client was an individual responsibility and they felt obligated not to let the structure of the organization get in the way. Social workers described how they would take information from CPE programs and use it with clients even if that meant going outside an organizational policy. It was interesting to note, however, that social workers who were employed in health care described the structure of the organization similar to the way nurses described the structure. Social workers employed in health care organizations felt there were more structural hurdles to the use of new information than social workers in private practice or governmental agencies.

Human resources frame. All three professions indicated that other people in the organization were for the most part encouraging and supportive to using new information in their practice. Nurses and social workers indicated that their "bosses and colleagues" were usually open to new ideas and willing to try new things, as long as "the ideas weren't too far out". Nurses and social workers expressed that they often talked with colleagues about new ideas or "just to run things by them" before trying something new. Additionally, the nurses and social workers who had more years of experience in their practice seemed to more openly discuss practice issues, concerns and new methods for providing care than did their younger colleagues.

Lawyers, however, were often in individual and solo practices, as a result, the human resources issues affected them differently. Lawyers indicated that they often had to seek out other people so that they had a colleague to talk with about new ideas. Lawyers indicated that people they worked with did not get in the way of using new information, but rather the issue was not having enough easily accessible colleagues with whom to talk. Many lawyers in this study developed informal colleague networks of individuals with whom they could interact. Sometimes these were infrequent lunch or breakfast groups that met when an issue arose and other times they were structured groups that met on a routine basis. The interesting finding here was that these were groups created for the express purpose of sharing ideas in practice, but these groups were created outside of a CPE mechanism. For example a lawyer in this study described a group in which she was involved.

> *. . . there are 8-9 female attorneys that are about my age that get together once a month. It started when we all felt burned out and we had to talk to someone, since we are not in a firm, you need someone to bounce things off of. It started out being the burned out lady's lawyer's luncheon. We were named that by one of the other people's male secretaries. You know, "Those burned out lady lawyers are going to lunch". Now we are the BOLLL. We meet at a restaurant, once a month on Fridays. And they put us up on the bulletin board BOLLL and everyone goes, what's that?*
>
> *We interact and maybe we will help each other. If I have a form that I think is useful, I will share it. Or if someone used a new appraiser in a certain County to appraise a house that we don't know about, we will share that information. If somebody learned anything in a seminar that someone else was at or had a case that was different, we kind of bounce ideas back and forth. We talk about psychologists that do evaluations and custody cases or maybe hints on how to deal with other difficult attorneys, because in family law, sometimes the hardest thing is dealing with the other attorney. It is so confrontational because the parties are not getting along or they wouldn't be going through a divorce. So a lot of times it seeps over into the other lawyer and your worst enemy when you are doing a divorce can be the other lawyer. So we talk about how to deal with that. . .*

Political frame. In each of the professions interviewed, the political frame was used in a different manner. Lawyers seemed to ignore the political frame and incorporated whatever information they needed in their practice. It is not that lawyers were unaware of political issues, but rather that the political issues did not impact how they used information from CPE programs.

Social workers were well aware of the political frame and used information from CPE programs in what they saw as their advocacy role. Social workers were very well aware of both the macro and micro political issues that impacted their work, and yet, would indicate that "just because a door is closed, it does not mean it is locked." Social workers expressed that their role as an advocate was political and as such, they felt it imperative that they not only understand the politics of the contexts in which they worked, but that they be able to work in the political realm to help meet their clients' needs.

In contrast, nurses would literally screen out information from CPE programs if they believed the political context would prevent its use. For example, nurses indicated that they would not even share information from CPE programs if they felt they did not have the power, money or time to use the information.

Symbolic frame. For nurses and social workers it appeared that the political issues of their practice seemed to define the symbolic frame in many ways. The issues of gender, power, change, money and time all initially arose from the political frame but became imbedded in the organization as part of the symbolic frame. So for nurses and social workers there did not seem to be a real clear distinction between these frames. Lawyers described one element of the symbolic frame that did have an impact on their use of knowledge. Lawyers described how their work was set within an adversarial system and that their use of knowledge was often done as a mechanism to "defeat the other side" or to "win the case". Lawyers would describe that they felt good in their practice when they could "obtain an outcome for their client that the client wanted."

Implications for the Practice and Research in Adult Education

This study raises a number of questions and implications for adult education specifically, in the area of continuing professional education. First, it suggests a major research question in the field of continuing professional education: Is application of knowledge an outcome of continuing education or part of the knowledge construction process? This study supports Detterman's (1993) position that there is no general cognitive skill that promotes learning transfer, and thus the importance of contextualized learning is emphasized. Perhaps, this study should be replicated across additional disciplines to determine if other professions integrate new knowledge in a similar fashion to the three described here. Additionally, the field of human resource development (HRD) shares with CPE an interest in context and learning. Questions raised in this study are pertinent to HRD and need evaluation in an HRD context as well. Specifically, the role of HRD in developing learning communities, organizational learning processes, and professional competencies would benefit from an examination of learning and context.

The role of a CPE provider, as indicated in this study, is much more than simply designing programs so professionals can adopt new information in their practice. The role of the CPE provider is facilitating a process of learning, reflection, growth and change. Study findings indicate that adult educators need to come to a new understanding of learning and context. No longer can education be seen as the provision of learning materials and educational programs to the individual. In today's complex, fast changing, technology enhanced environments it is incumbent on adult educators to view the learning as situated in a unique context and to consider how this context enhances, detracts or shapes the learning of the individual. In other words, "the unheralded importance of activity and enculturation to learning suggests that much common educational practice is the victim of an inadequate epistemology. A new epistemology might hold the key to a dramatic improvement in learning and a completely new perspective on education" (Brown, Collins, & Duguid, 1989, p. 41). As professionals continue to be integrated into organizations the linkages between context and practice need to understood, defined and analyzed so that learning and professional practice can continue to grow in these new contexts.

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How Important is Education for Learning to Work?

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Work and the expertise needed to perform it have been the subject of studies of the individual craftsman, small groups, cross-functional teams, occupations, and settings in which workers from diverse backgrounds must function. This paper reviews literature on this topic at each of these levels—from studies of individual to collective expertise. Then, the paper examines the research methods available for conducting such studies. The core question addressed by this literature is, "How do people integrate prior learning and experience with the present demands of a task to perform it skillfully?" A framework for the further study of this question is proposed and justified.

Keywords: Skilled performance; Work analysis; Ethnography

Studies of work and the expertise needed to perform it range from studies of a single worker to meta-studies of groups of workers with diverse occupational backgrounds. Research has examined the skills of a single craftsman (Harper, 1987), a group of two or three people working closely together on the same task (Pinch, Collins and Carbone, 1997; Suchman and Triggs, 1993), the work of those in an occupational group (Henning, 1998; Hutchins, 1993; Orr, 1996), the skills required by those with different jobs, yet all within high technology (Darrah, 1994; Dubinskas, 1988; Kunda, 1992; Pentland, 1992), manufacturing (Giordano, 1992; Graham, 1993; Scribner, 1984), or health care (Cicourel, 1990; Nelson, 1997; Scarselletta, 1997). Other studies have examined the skills of technicians in a wide variety of occupations (Barley, 1996; Barley and Orr, 1997). Some researchers have extended their studies to workers with diverse occupational and demographic backgrounds (Hodson, 1998; Zuboff, 1988). The next section reviews literature that ranges in scope from studies of individuals to studies of collective expertise.

Individual craftsman. Harper (1987) studied of craftsmanship and resourcefulness of the owner of a small repair shop. Because of Willie's expertise, the subject of Harper's fascinating book, automobiles and a wide range of non-automotive equipment were brought to the shop for repair. Harper used interviews with Willie, photographs of the work environment, and detailed accounts of different kinds of repair projects to describe Willie's remarkable ability to fix almost anything by improvising with whatever odds and ends were available. Harper portrays Willie as the embodiment of Levi-Strauss's (1966) *bricoleur*—the odd-job man or jack-of-all-trades who makes innovative use of left over bits and pieces to solve emergent problems. Willie is shown to be a skilled craftsman who moves from one repair problem to the next, constantly identifying potential solutions by making use of *what is available* around the shop. Harper's account shows the importance of Willie's continuous learning to the quality of his work as he improvises methods to fix all types of equipment including old tractors, grain silo pumps, and wooden structures near his shop.

Working on a common task. Pinch, Collins, and Carbone (1997) addressed the issue of how hard a given task is to perform and how hard one should work at it before giving up. The authors provided ample justification for the importance of this issue by showing how widely the estimation of the difficulty of a task is used. Technical workers and craftsmen (for example, plumbers, mechanics, and carpenters) often have to price jobs by estimating how difficult the jobs are to complete. Managers often estimate the complexity and importance of a task to determine whether or not they have time to address it. The authors provided two detailed accounts of the work of veterinary surgeons performing abdominal surgery to geld a 15-month old horse (that is, remove the testicles) and to spay a female ferret (that is, remove the uterus). The methods for studying this work included observation, the study of surgical training films, unstructured interviews, and audio and video recording.

The description of the surgery to spay the ferret demonstrated how the estimation of difficulty might be used to improve surgical practices and the importance of experience in dealing with the unforeseen difficulties that often arise in surgery. Upon entry to the abdominal cavity, the surgeon should have been able to find the uterus almost immediately, but instead he had to backtrack through a process of mapping the location of internal organs and tissues that identify the location of the uterus. The study provides a verbatim account by the surgeon and the surgeon's assistant of the process of trying the location and remove the uterus. After nine and a half minutes of surgery the uterus could not be located. The surgeon began closing up the abdomen while discussing with the

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researchers the possibility that the animal was a actually a male ferret. Perhaps the animal was a hermaphrodite or had prior surgery disguising its sex. Even at the termination of surgery the surgeon could not be certain about the animal's status. Should he have spent more time searching for the uterus? Did this particular ferret possess anatomical anomolies? Would a more skilled surgeon have found the uterus right away? In part because the difficulty of this task is known (if a uterus is present, it should be readily located), the surgeon became suspicous right away and ended the surgery in about nine minutes. The authors discussed the utility of expressing task difficulty in a ubiquitous language such as using numbers, as long as the numbers could be understood in context. The difficulty of a task can be roughly expressed in the length of time needed to complete it or in the number of iterations it should take to achieve success or failure. A veterinary surgeon should be able to find a normal ferret's uterus within a few minutes. For a horse with undistended testicles (they are retained in the abdomen, not in the scrotum where they should be), locating them will take longer but the time estimate needed for this is known. The authors have told their perplexed graduate students to expect to redraft an academic paper at least a dozen times, whereas a term paper may only need one revision. They conclude that learning the difficulty of a skill is an important aspect of training the technical workforce.

Suchman and Trigg (1993) examined the work of artificial intelligence (AI) researchers engaged in solving a particular technical problem as a way of understanding the professional practice of artificial intelligence. The researchers studied were delegating human competence to machines by developing scenarios of real activity as text, transforming these scenarios into abstractions (graphics and symbols), and writing computer programs for "intelligent machines." The episode of technical work described by the authors involved the exchange between two researchers during a session in a corporate AI laboratory devoted to knowledge representation—a central task in AI work. Working on a computer program to model "situated inference" about time, place, persons, and events, the two researchers were designing a meeting scheduler capable of interacting with a hypothetical user to maintain a weekly calendar of events. The problem is to encode the scheduling rules in such a way that the system could use them successfully at a later time.

The authors videotaped the working session in which the AI researchers discussed the problem and mapped it out extensively on a whiteboard in the laboratory. Verbatim exchanges from the key parts of the discussion provide insight to the expertise of the researchers and to the nature of AI as craftwork. The researchers' work with AI is described as a series of representations moving from a simplified textual scenario of a real world experience, to a graphical abstraction of the scenario, to inscription of this abstraction as code on the machine, and finally, to a reconnection of the machine to the world through its interaction with a human user. The scenarios, abstractions, code, and programs comprise the objects of the work discussed by the researchers. These objects mediated between the real experiences being modeled and capabilities desired from the machine.

Work within different occupations. Henning (1998) studied the work and learning that occurred among a group of refrigeration service technicians over a seven-month period. Using situated learning as the theoretical foundation, Henning's ethnographic study examined the principal kinds of learning among seven technicians with different levels of formal training and job experience. Adopting the ethnographer's interest in capturing the experience from the participants' perspective, Henning extensively observed the technicians in the supermarket compressor rooms where they performed much of their work. Unstructured interviews with technicians were documented through field notes and audiotapes. Observations and interviews were supplemented with videotaping of routine and unusual service events and the analysis of documents and other artifacts.

Three types of learning in which the technicians were engaged were described by Henning. Learning occurred through the physical and technical objects in the work environment, through particular forms of discourse and communication, and in the social relationships that were built around the service department. Objects present in the technicians' work setting such as compressors, refrigeration cases, and heat reclamation systems allowed learning through sensory impressions from sight, smell, touch, and sound. Learning occurred during discussions of typical problems encountered by technicians and through stories about unusual or noteworthy repair situations. Learning also arose from social relationships among the servicemen, their supervisors, and others with whom they interacted frequently on the job. In managing the interpersonal and technical challenges associated with refrigeration equipment in the supermarkets for which they were responsible, the technicians used locally available resources and each other to learn and improve their refrigeration service skills.

Hutchins (1993) provides an in-depth account of the expertise required for navigating large ships. Responsibilities are distributed among the members of a navigation team composed of three to six members, depending on the size of the ship. Members of the navigation team who are not located in the pilothouse interact continuously using radios, closed-circuit television, and visual contact. This is especially important for error-free navigation in confined or busy waterways. The career trajectories of naval navigators are such that most members of the team have previously held the positions of one of their junior colleagues. Advancing through progressively difficult navigation jobs allows for the overlapping distribution of expertise among members of the team. The expertise for navigation is not fully captured by any single member's conception of the navigation task. As Hutchins (1990) observes, "[The] sequence of actions to be taken need not be represented any where in the system. If participants know how to coordinate their activities with the technologies and people with which they interact, the global structure of the task performance will emerge from the local interactions of the members" (p. 209). The distributed nature of the expertise required for naval navigation and other group work has implications for workplace learning that are examined next.

Detailed accounts of how photocopier repair technicians resolve the problems encountered in restoring a malfunctioning photocopier to working order emphasize the crucial contribution of contextual understanding to the development of their skills. Beyond basic technical expertise, technicians need a richer understanding of the social context of how photocopiers are designed and used. Orr (1990, p. 171) makes the following observation about successful photocopier repair work:

> [Photocopier repair] is not simply a matter of finding out what is wrong with the machine; there may be nothing wrong with the machine as a thing, in and of itself. The problem may rather lie in the interaction of the machine as it is, the uses its designers anticipated for it, and the uses, methods desired, understood and chosen by the customers. The designers' interpretation of how one would use the machine cannot preclude other interpretations, but the others, because unanticipated, may be unsuccessful. This may appear to be a problem to the customer whose interpretation of how to use the machine fails.

Diagnosis of the malfunction is complicated because the state of the machine is often unclear—a technical problem that is resolved through the social interaction of the technician, customer, and machine. Technicians' skills must not only include techniques for machine diagnosis and repair but a broader understanding of the social context of use in which customers make demands of the machine, regardless of designers' intentions. Accurate reconstruction of the machine-user interaction is rarely possible for technicians, though such insight would greatly expedite the repair process. Instead, technicians must construct their own representation of the problem as the basis of making repairs. Problems that cannot not be fully anticipated in advance demand contingent responses; the use of scripted repair procedures by technicians is insufficient.

Moreover, the sharing of knowledge among members of the technician community is crucially important to the service task. Typical of the encounters described by Orr is a discussion between two experienced technicians exchanging quite different views on what to do about a malfunctioning machine. One technician interprets an error code from the machine literally, whereas a second technician believes the code to be a red herring, and, in following a different diagnostic path, discovers new problems that ultimately lead to the real source of the machine's breakdown. Through the continuous sharing of their experiences, technicians construct a broader base of knowledge than any one technician possesses.

Different occupations within a common industry. Giordano (1992) described how the work of four related occupations—machinists, draftsmen, design drafters, and engineers—was changing in the face of computerization within a major defense contractor. She found that two distinct types of machining expertise were emerging from these changes: the manual skills that have traditionally defined this occupation, and the abstract, cognitive processes now needed by machinists to transform computerized information into precisely machined parts. Although automation simplifies and, in effect, deskills parts of the machinist's job, the overall effects of computerization on machining increase the skills required of machinists who must now program and operate advanced machine tools. She also found that technology now allowed not only the rearrangement of tasks, but the reclassification of entire jobs. For example, it is now conceivable that the machinist's role, long crucial to basic manufacturing processes, could be eliminated as engineers become capable of programming and operating machine tools from their computer terminals. Thus, technology not only upgrades the capabilities within a job, it reshapes the distribution of work at higher levels as related jobs are combined, expanded, or eliminated.

Graham (1993) used direct experience as a worker on an automotive assembly line to explore the contention that the Japanese style of management increases worker autonomy. To gain access to a midwestern Subaru-Isuzu assembly plant, Graham went through the hiring and orientation process as a new production worker. As a "hidden participant/observer" whose research intentions were unknown to management, the author hoped to gain access to this environment quickly and conduct her research with no disruption of the natural course of events on the shop floor. Graham used her day-to-day observations as a factory worker, informal discussions with 150 co-workers, and formal documents distributed by the company during her 6 months of employment to provide a detailed account of the work performed in the "trim and final" department of the assembly plant.

Graham described her struggle to keep up with a demanding sequence of assembly tasks on a rapidly moving production line and other manual and psychological challenges of factory work in an environment where employee productivity and time-and-motion studies were highly valued. The author divided her findings on the experiences and reactions of worker into two sections: their compliance with, and their resistance to the Japanese style of management used by the company. Field data was related to seven key features of the author' experience as a plant worker: the pre-employment selection process, orientation training, the team concept used in auto assembly, the *kaizen* (continuous improvement) philosophy at the plant, attempts at shaping the shop floor culture, the plant-wide computerized assembly line, and just-in-time production. The results of the study provide insights into individual versus collective reactions to management pressures for higher productivity and spontaneous versus planned resistance to management initiatives. Based on the study, the author questions the contention that the decentralized authority associated with Japanese management increases worker autonomy.

Workplace ethnographies in diverse settings. Barley (1996) argued that the work of technicians, who function in settings as diverse as off-shore oil rigs and hospital emergency rooms, is indicative of fundamental changes in the nature of contemporary work. Due primarily to innovations in technology and changes in the economy, work has become more technical, technical expertise has become more unevenly distributed, and the roles of technicians are less readily formalized. Barley and his colleagues show evidence of these changes in their integrated program of ethnographic research on the work of technicians in many settings (Barley, 1996). Ethnographies have yielded rich descriptions of the work of science laboratory technicians, computer hot-line support technicians, emergency medical technicians, automobile service technicians, customer service engineers, radiology technicians, library technicians, medical laboratory technicians, and computer programmers (Barley, 1996; Barley and Orr, 1997). Hodson's (1998) review and classification of 108 organizational ethnographies, including those of Barley and colleagues, shows this group of studies to be a rich source of insights into the nature of work, yet underutilized by organizational, occupational, and educational researchers. Zuboff's book, *In the Age of the Smart Machine*, is another product of ethnography in organizations that has become a major chronicle of how information technology has fundamentally changes the ways in which worked is accomplished. Her study followed a bottom-up approach to the examination of eight organizations with several industries which were all undergoing significant technical reorganization of their basic work systems (Zuboff, 1988).

Research Methods in Studies of Work

Several research methods, mostly from the qualitative tradition, have been used in these studies of work. Organizational ethnography provides deep insights into the nature of work, yet only recently has this method been used in the workplace (Hodson, 1998). Garfinkel (1967) defines ethnomethodology as "the study of a particular subject matter: the body of common-sense knowledge and the range of procedures and considerations by means of which the ordinary members of society make sense of, find their way about in, and act on the circumstances in which they find themselves" (p. 4). Ethnomethodology is not restricted to any particular domain of knowledge and can be used as a sense-making technique in any context with uncharted dimensions. This definition of ethnomethodology reflects Van Maanen's (1982) five principles that address the procedures and content of all qualitative research.

(1) *Analytic induction.* Qualitative research begins with close-up, detailed observations and builds generalizations from the ground up. Prescriptions are tentatively offered on the basis of their ability to fully contain the available data.

(2) *Proximity.* The investigator should witness first-hand the phenomenon he or she proposes to understand, and not rely on reports of such. People should be observed engaged in activities that matter to them, the performance of which is, to them, of more importance than their performance in front of the investigator.

(3) *Ordinary behavior.* Qualitative studies occur in the natural world of those studied and examine their everyday activities. Whatever interrupts, alters, or distorts these ordinary activities is to be minimized.

(4) *Structure as ritual constraint.* The meanings of human actions and the contexts in which they occur are distinctive features of qualitative research. To ignore these features is to impose structure rather than discover it.

(5) *Descriptive focus.* Qualitative research seeks to fully describe what is occurring in a given place and time. The aims of revelation and disclosure take precedence over explanation and prediction (p. 16).

Mintzberg (1979) described several basic themes that emerged from three major research projects in which he participated to support his contention that qualitative research is "direct research." Rather than producing prescriptions through deductive methods, this research was as descriptive and inductive as possible. The research included many elements of organizational life using the organization's own terms, rather than focusing on a few variables that were measured in perceptual terms. Mintzberg uses the analogy of a marble cake to show how researchers examine an organization in ways that have nothing to do with how it functions. When researchers force the organization into abstract categories by using their terms rather than its own, the researchers are reduced to using perceptual measures, which often distort the reality. Rather than appreciating the whole marble cake, rich in swirls and patterns, researchers focus on a slice of the organization with the discrete variables that interests them. Then they make interpretations about the slice as if it was the entire organization. Instead of analyzing the elements of discrete variables, Mintzberg's research synthesized the elements into clusters that show various configurations of organizations as ideal or pure types. In contrast to quantitative approaches to research, Mintzberg emphasizes research as a journey, not a destination.

Webb and Weick (1979) made a case for greater reliance on unobtrusive measures (that is, data collection methods other than surveys and self-reports) in multimethod organizational research. They support this contention with several characteristics of unobtrusive measures that make them desirable for studying organizations. Unobtrusive measures allow investigators to match the dynamic nature of the phenomenon of interest with variety in the sensing devices that are applied to it. Although interpretation of the data collected becomes more difficult, multiple measures that converge on the phenomenon are preferred. Whereas surveys and self-reports are best used with those who are more articulate—a practice that results in the overrepresentation in data sets of the views of those who have higher level positions, unobtrusive measures can be used with those at all levels of the organization. Unobtrusive measures also allow investigators to capture information that allows fuller interpretation of events, but because it may seem benign, untraditional, or puzzling, may otherwise be ignored.

In another example of the benefits of mixing quantitative and qualitative research techniques, McClintock, Brannon, and Maynard-Moody (1979) described a strategy for combining stratified sampling with qualitative analysis. Using a technique called the *case cluster method* of data sampling, the authors studied the complexity and predictability of a broad range of tasks performed by those at four hierarchical levels of a university. Study participants in four job categories (administrative, faculty, non-faculty professional, and clerical/maintenance) described the tasks they performed. Participants then sorted the tasks by complexity and predictability. Using the four combinations of two, bi-level factors (simple/complex, predictable/unpredictable), a wide range of tasks from jobs throughout the organization were categorized into the four quadrants of a matrix for task uncertainty. With tasks as the unit of analysis, data were then analyzed qualitatively to discover patterns in the structure of tasks that contribute to their uncertainty.

Adler and Adler (1994) describe the role of observational techniques in ethnomethodology as a way of uncovering processes that are below the level of conscious awareness, at the taken for granted level. This level of sensitivity is possible from any of Gold's (1958) four perspectives from which observers may gather data: the complete participant, the participant-as-observer, the observer-as-participant, and the complete observer. Ethnographers prefer to use observational techniques that focus on very micro exchanges such as the means people use for taking and yielding the floor during conversational exchanges. Data from audio- and video-taping are analyzed to bring readers as close to the situation as possible by showing conversational overlaps, pauses, intonations, and distractions. The authors suggest that observational data gathering in ethnography continues until researchers approach theoretical saturation (Strauss and Corbin, 1990)—that is, when the generic features of their new findings consistently replicate earlier ones.

These research methods have been used to examine the question of how skilled performance is developed. Yet, *how well* have researchers used these methods to examine this issue? That is, how is research designed most effectively to study this question? The following questions are posed, and then revisited at the end of the paper, as the basis for designing research to answer this question.

- What group of workers is selected for study? Why this job or occupation?
- How many individuals or cases should be studied? Is the unit of analysis the individual worker or a homogenous group of workers?
- What roles do the materials and conditions in the task environment play in the development of skilled performance?
- During how long a time period should this group of workers be studied? Is six months too short a time period? Is three years too long?
- How is the data analyzed? Detailed analysis of each worker studied? Cross-case analysis of individual learning? Of group learning? Analysis of themes with other studies?

Answers to these questions can be obtained from two seminal studies of how skilled performance is developed. Of the studies reviewed in this paper, those by Scribner (1984) and Suchman (1987) best address the question, "How do people integrate prior learning and experience with the present demands of a task to perform it skillfully?"

Scribner (1984) studied the work of two groups of dairy plant workers—product assemblers and wholesale delivery drivers. Product assemblers prepared product orders, composed of milk and other dairy products, for shipment to customers based on computer-generated order forms. Wholesale delivery personnel were responsible for delivering orders to customers, including computing the dollar value of the dairy products on invoices. Scribner studied these tasks—assembling product orders and pricing delivery invoices—to compare the work strategies of experienced workers with those new to the tasks. Workers in this environment were presumed to rely on a combination of procedural knowledge from task-specific rules and pragmatic knowledge gleaned from experience. Greater understanding was sought about the different roles these types of knowledge played in the work strategies of experts and novices. Support was sought for the premise that cognitive skills take shape in the course of participation in socially organized practices. Thus, learning in the context of practice would be an essential determinant in the development of skilled performance.

Reflecting the wide range of institutional and retail customers served by the dairy, each dairy order was unique in size and composition; consequently, order prices varied. Despite the availability of procedures and computer forms for assistance, wholesale delivery personnel adopted their own alternative methods for pricing delivery invoices (for example, effort-saving algorithms and personal crib sheets) that were not used by those new to the task. At the close of each delivery, experts made use of physical aspects of the environment, such as product containers and shipping cases, as cues for computing subtotals for customer invoices. Their own pragmatic problem solving gave rise to these strategies for preserving mental effort on the job. A parallel demonstration of pragmatic thinking to save manual effort was apparent among product assemblers. Economy of effort functioned as a criterion distinguishing skilled from amateur performance. As opposed to relying primarily on procedural knowledge, successful work strategies were goal-directed and varied adaptively with the changing properties of the problems and resources encountered by workers in the task environment. These contextual factors influenced the development of skilled performance and illustrate how workers in a production environment learn and adapt their skills on the job.

Another important study of how knowledge is constructed on the job was done by Lucy Suchman. Suchman (1987) studied human-machine interaction to demonstrate the limited role that planning plays in shaping the actions of photocopy machine users. The study also demonstrated how a better understanding of human intelligence can contribute to the design of interactive machines. A major objective of her study was to examine the structure of *situated action*—purposeful action that depends in essential ways on material and social circumstances—to capture "those fleeting circumstances that our interpretations of action systematically rely upon, but which our accounts of actions routinely ignore" (p. 109). Instead of reports of action such as interviews or observations by the researcher, Suchman examined transcript data from videotapes of users interacting with a photocopier. A characterization of the interaction between user and machine was constructed using a four-part analytic framework. The framework categorized displays and messages generated by the machine and distinguished the user's actions that were recognizable by the machine from those that were not (while the videotape captured all user and machine behaviors, only user actions interpretable electronically were available to the machine).

The study showed that the coherence of the user's actions was largely unavailable to the machine. The verbal protocol from the videotapes allowed the researcher to identify the problems encountered by the user and interpret the user's responses to the problems. Because a full record of machine and user behaviors was available, points of confusion could be precisely located. Detailed study of the situated actions of users could then be used as the basis for recommendations for improving the design of photocopiers.

In these studies both Scribner and Suchman depart from pure forms of qualitative or quantitative research by combining complementary features of each approach. Scribner's study of dairy workers demonstrated the role of context in the development of cognitive skills by combining an ethnographic approach to data collection with a research design based on controlled experimentation. Scribner's ethnographic description of the dairy was followed by observational methods to determine which tasks were involved in certain work practices, to describe their characteristics, and to discover the constraints imposed by the work setting. Experimental methods based on the problem solving research of Newell and Simon (1972) were then used to refine these task descriptions and to analyze component knowledge and cognitive processes involved in their accomplishment. Suchman (1987) produced a case study about human-machine communication generated from the perspective of an anthropologist. However, departing from traditional anthropology, Suchman examined individuals, not groups or larger social systems. Moreover, her interest was not primarily in social or cultural processes, but in human-machine interaction. Thus, the rich descriptions of how working knowledge is constructed from both Scribner and Suchman relied on adaptations of qualitative and quantitative research methods to meet the purposes of their studies.

Questions to Guide Further Study of Skilled Performance

Now we return to the questions on designing research to study how people integrate prior learning and experience with the present demands of a task to perform it skillfully.

- How many individuals or cases should be studied? Is the unit of analysis the individual worker or a homogenous group of workers? These considerations should be justified on theoretical grounds as the basis of research methodology.
- Focus on how individuals learn to perform their work. This involves (a) describing whatever learning occurs during task performance, as well as (b) identifying prior formal and informal learning needed for skilled performance. Because the study is focused on how individuals integrate prior learning and experience with the present demands of the task, formal job preparation must be completed prior to the start of the study.
- During how long a time period should this group of workers be studied? Is six months too short a time period? Is three years too long? The study should identify what contributes to the learning needed for skilled performance. Contributions may come from formal job preparation, work experience (apprenticeship), continuing education, and other factors. The study should continue long enough to describe the basis for making these distinctions. Thus, the length of the study should also be justified on theoretical grounds.
- Describe the overall situation and goals of the work. This includes describing the environment, setting, history, and background.
- Describe in detail how the work is performed in a phase-by-phase manner. Work analysis methods should be used and the descriptions should be verified for authenticity by participants.
- How is the data analyzed? Detailed analysis of each worker studied? Cross-case analysis of learning across individuals and groups within the study? Analysis of themes with other studies? All of these?
- What roles do the materials and conditions in the task environment play in the development of skilled performance?

A well-designed study of how skilled performance is developed would fully answer these questions.

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Critical Reflection on the Shop-Floor

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The purpose of this study was to describe on-the job learning and to find out if 'flexible craftsmanship' is a useful measure of output for on-the-job learning. The results indicated that flexible craftsmanship is no neutral measure of output, because it takes into account only the employer's view of 'ideal employees'. A certain form of on-the-job learning (namely critical reflection) may itself serve as a more neutral measure of output for further research.

Keywords: Critical Reflection, On-The-Job Learning, Informal Workplace Learning

Problem Statement and Theoretical Framework

The research reported in this paper is the first, explorative phase of a four-year research project that started with the question of how to describe and explain the informal on-the-job learning process the aim of the first phase of this research was to find out if flexible craftsmanship really is a useful measure of output for on-the-job learning. Marsick and Watkins (1990) define informal and incidental learning as the learning that results from the natural opportunities for learning that occur every day of a person's working life when the person controls his learning. According to Marsick and Watkins (1990), informal learning can be planned or unplanned and involves some degree of conscious awareness that learning is taking place. Incidental learning is expected to be a sub-category of informal learning and is defined as a by-product of some other activity, such as task accomplishment, interpersonal interaction, or trial and error experimentation. Incidental learning is unintentional and unexpected and almost always takes place although people are not always conscious of it (Marsick and Watkins, 1990).

Furthermore, the underlying idea was that the informal on-the-job learning process should serve a purpose, or lead to a specific objective. On-the job learning should result in a better, more competent employee. To this end the concept of 'flexible craftsmanship' was developed. As in many professions changes take place in the content and organisation of work, flexibility is an important and necessary aspect of craftsmanship. Sternberg (1985, 1988) connects flexibility with the concept of experiential intelligence which relates to two aspects of intelligence that are counterparts, namely coping with novelty and automatisation. The newer the tasks and situations are that a person is confronted with, the more they will appeal to his ability to cope with novelty. On the other hand, if experience of the same kinds of tasks increases, the appeal is to his ability to develop routines. Too much emphasis on experience variation may come at the expense of efficiency and productivity, whereas too much emphasis on experience concentration may come at the expense of flexibility and employability (Thijssen, 1996). This means that flexibility is not the be-all and end-all; for an effective and productive performance, there needs to be a balance between routine and flexibility. In the research, informal learning processes were therefore assumed to influence both craftsmanship (the ability to function effectively and efficiently in a profession) and flexibility (the ability to cope effectively with change). Since flexible craftsmanship is a newly-developed concept on which no further literature is available, the aim of the first phase of this research was to find out if flexible craftsmanship really is a useful measure of output for on-the-job learning. In order to be able to study on-the-job learning more extensively in the next phase of research and in a less explorative manner, the other aims of the explorative phase were to demarcate this concept more clearly, and to gain an insight into the factors that are influencing it.

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Research Questions

The research questions for the first exploratory phase of the research are:

1. Is 'flexible craftsmanship' an adequate measure of output for informal on-the-job learning?
2. How can informal on-the job learning be better demarcated?
3. What factors (individual and organisational) influence informal on-the-job learning?

Methodology

To answer the above research questions, case studies were carried out in seven organisations: two banks, three factories (a cheese factory, a packaging factory, and a textile-printing factory), a call centre, and the Post Office (organisation). These case studies function as a preliminary investigation for the main research. On the basis of the results of the case studies, more extensive research will be conducted, in which the findings of the case studies will be tested. A case-study design was chosen because of the need to research the reality value of the limited conceptual model by identifying the viewpoints of participants in organisations (Swanborn, 1996) and because of the need to construct a theory arising from the observations. 'Explorative' means that not just the initial concept (flexible craftsmanship) was tested, but also that allowance was made for alternative explanations concerning the topic of the research. The cases were analysed in a comparative way. The aim of comparing the results of the case studies was to build a general explanation model that would fit each of the individual cases, even though cases would vary in their details (explanation building Yin, 1994). Since the case studies were explorative, no specific criteria were used for selecting them, except for a reasonable balance between services and industries. For reasons of efficiency, an approach was made to organisations that had already had contact with other departments of Stoas.

Table 1: Organisations and respondents

Organisation	Respondents			
	Senior Managers	Line Managers	Shop floor Workers	Total
1. Cheese Factory	1	1	2	4
2. Packaging Factory	2	1	1	4
3. Call centre	1	1	2	4
4. Bank 1	2	1	2	5
5. Bank 2	2	1	2	5
6. Textile Printing Factory	2	1	2	5
7. The Post Office	2	1	2	5
Total	12	7	13	32

In order to form an idea of the view of management and its strategy, as well as of daily practice on the shop floor, the respondents in these organisations represent different hierarchical levels. The first interview to be conducted in these organisations was with a senior manager concerned with personnel. The (summarised) interview questions put to this manager were:

- Can you give an overall impression of the company's background?
- What kind of developments does this company have to contend with?
- What are the consequences of these developments for the definitions of craftsmanship and flexibility? What is your definition of a 'good employee'?
- What is company policy towards the learning organisation and on-the-job learning? Is this company a learning organisation? Why (not)?

Subsequently, line managers and shop-floor workers were interviewed. Apart from the same interview questions as were put to the senior manager (sometimes aimed more at the department of the organisation people work in), these employees were asked the following (summarised) questions. (The interview with the line managers related to the jobs of their employees instead of their own job):

- Can you describe your function and the position of your function in this organisation?

- Can you discuss the recent changes in your job? What consequences did these changes have for you? Did this lead to problems in your functioning? What were they?
- Do you perceive yourself as a craftsman or a 'good employee'? Why? Do you perceive yourself as flexible? Why? (line manager: What is your definition of craftsmanship, a 'good employee', a flexible employee? What bottlenecks exist concerning craftsmanship, etc.)
- Are you stimulated to develop your craftsmanship? In what way? Are you stimulated to be flexible? In what way? (line manager: What measures are being taken to stimulate craftsmanship, flexibility and employability?)
- Can you learn in and from your job? Why? Can you give examples of things you have learned in the past year?
- Do you reflect on problems in your work and how to solve these problems? Can you give an example? Do you ever try to improve aspects of your work or your way of working? Can you give an example? Is it a challenge to learn? Why?

The interviews were written into reports, in which the topics discussed were clustered under the following headings: background information, developments, definition of flexible craftsmanship and a 'good employee', on-the-job learning, factors influencing on-the-job learning. Reports of the interviews were sent to the respondents for feedback. Next, the results of all seven case studies were summarised in a data-matrix containing the same topics as the interview reports. If interviews with participants within one organisation were not convergent this was also noted. Subsequently, the results of each of the topics were summarised in a way that fitted all the individual cases in general. These results are discussed in paragraphs 4.1 to 4.6. Due to limited space, and in order to enhance the readability of this article, it was decided to illustrate the results with some examples, instead of systematically discussing all the cases in the same degree of detail. However, if some of the cases do not support the summarised results, this will be explained.

The research reported here is explorative, and started with quite broad research questions. It was, however, considered necessary as a first step in the total research process to start as close as possible to real-life situations in organisations, in order to make the right decisions and create an appropriate research model for the continuation of the research. Furthermore, an interview-based approach with a semi-structured interview guideline brings its own limitations when discussing a topic like informal workplace learning, which is mainly tacit. However, for the first phase of the research, this was considered the best option; for the continuation of the research, more specific research instruments will be developed on the basis of the results that are being gathered.

Results

The following paragraphs discuss the results that emerged from the case studies. The first research question is answered in paragraphs 4.1 to 4.3; paragraphs 4.1. and 4.2 discuss the problems that emerged concerning the concept 'flexible craftsmanship'. Paragraph 4.3 discusses the relationship between informal on-the-job learning and flexible craftsmanship. Paragraph 4.4 introduces both an alternative measure of output for on-the job learning (instead of 'flexible craftsmanship') and an answer to the question of how on-the-job learning can be better demarcated. Paragraphs 4.5 and 4.6 discuss respectively individual and organisational factors that influence informal on-the-job learning.

The Conflict between Flexibility and Craftsmanship

The first thing to emerge was that the concept of 'flexible craftsmanship' is more complex than had been expected. Flexibility may well be incompatible with craftsmanship. As a result of competition, generally speaking, two things may occur in an organisation. There may be strong pressure either on quality or on efficiency (or both). In the latter case a great deal is invested in computerisation and, as a result, jobs may be downgraded or disappear altogether. The conflict between flexibility and craftsmanship is shown most clearly by the case study of the call centre. In the call centre, operators have to answer calls from customers who are looking for a telephone number (8008-service). Here, flexible employees are seen as those who can adapt easily to the new demands the employer is making on the profession. These demands are to comply with the standards regarding the number of calls handled per hour, and to bring the call promptly to an end in a charming way if questions from customers prove too time-consuming. This new definition of craftsmanship conflicts with the old one: always try to help a customer, no matter how much time it may take. Employees, who in the old situation used to be seen as good operators, in the new situation may well be the ones that do not fit the definition of a good operator.

The other cases also showed the conflict between flexibility and craftsmanship. Jobs may not always be downgraded, but very often jobs have changed so radically that no part of the old job remains. Many workers in the cheese factory, the packaging factory and the textile-printing company were very fond of their 'old' craftsmanship being a traditional handicraft. Flexibility for them meant saying goodbye to their old craftsmanship and accepting what was sometimes completely different craftsmanship. At the banks this was especially the case for employees in administrative jobs that had been computerised, and for all the specialists at the bank who nowadays have to become generalists.

The question then is who is the most flexible craftsman, the one who accepts that his job has been downgraded or radically changed, or the one who puts up the greatest resistance? Flexible craftsmanship seems to be influenced by the extent to which one is able to come to terms with the demands made on the profession by management and one's willingness to leave the old craftsmanship behind. Flexible craftsmanship is thus not a neutral concept, but would seem to be an output measure of on-the-job learning seen purely from the employer's viewpoint.

Flexibility or Employability?

As stated before, the changes that occur in jobs may sometimes be quite radical. In many jobs very little of the former tasks remains. Some of the companies in the case studies (the Post Office, the call centre, and the giro bank) are in a state of transition from being a state-owned company to becoming a private company. This transition is bringing about many changes in jobs on the shop floor. Post Office counter clerks suddenly have to become commercially-minded and to sell registered post. In the call centre and the giro bank the transition from being a state-owned company to becoming a private company is putting great pressure on efficiency. Many jobs have become Tayloristic and, thanks to computerisation, many others have ceased to exist. In the giro bank those jobs that are left are of a higher level (skilled craftsmanship). At both the banks many administrative jobs have disappeared altogether because of computerisation.

Since employees cannot easily be dismissed, organisations often try to make attractive offers to those employees whose jobs have disappeared or to employees who are unable to comply with the new demands being made of them. They are often offered different positions within the organisation. Alternatively they may choose either to train for another position in the company, or to follow a course of training of their own choice. If they choose the latter, the deal is that the leave the company after a certain period of time. Many employees, however, remain in their old jobs and refuse the offers made to them, even though they know that their job will disappear or that they do not like the changes that are taking place in their job. A personnel manager at the Post Office stated that organisations with routine, rather undemanding jobs that have ceased to exist or will soon do so should try to ensure that their employees move higher in Maslow's pyramid (self-development) so that they can look for another job on their own initiative.

This leads one to the conclusion that flexibility should not be defined on the basis of employment with one specific employer. The ability to take responsibility for one's own career if one does not like the changes that are taking place in the job, and to continue this career with another employer may also be seen as a characteristic of a good employee. It is noteworthy that this ability is not only in the interests of the employee but also in those of the employer, if, for example, jobs change or disappear and employees cannot be dismissed because they are protected by law.

The Influence of the On-the-job Learning Process on Flexible Craftsmanship: Willingness or Potential to be Flexible?

Before starting the case studies it was assumed that flexible craftsmanship was influenced by the on-the-job learning process. Flexible craftsmanship was perceived as a kind of competence, something people can learn. However, the case studies made it clear that on-the-job learning is not the main factor that influences flexibility. More important than the potential of people to be flexible is their willingness to be so. Flexibility could thus better be defined as the willingness to cope effectively with change, rather than the ability to do so. In the packaging plant, an effort is being made to make shop- floor workers more flexible. Shop-floor workers employed in different positions on the same machine, or on different machines in the same production line, should be able to replace each other when a colleague is ill or on holiday. However, the different positions on a machine or production line represent different levels of craftsmanship and thus also different levels in status. A production manager explained that the willingness of shop-floor workers to be more flexible is limited when these tasks do not match their feelings of status or occupational identity. The fear that their old position is endangered, and the fear of failure also plays a role. Furthermore, workers fear an unfamiliar social environment, and especially new colleagues and supervisors. At the banks and the Post Office employees are sometimes required to work at another location. Although the extra travelling time may form a significant barrier to flexibility, the fear of a different social environment was often mentioned as a much bigger barrier. In the cheese factory and the textile-printing office also it was stressed that some workers simply do not want to be flexible, because being flexible often means insecurity and investing extra energy in learning other tasks (see paragraph. 4.5 motivation for learning).

Critical Reflection

Respondents were asked not only for their views on the concept of 'flexible craftsmanship, but also for their own definition of 'a good employee' or 'a real craftsman'. It emerged that many respondents, especially in the packaging factory, the cheese factory and one of the banks, mentioned the importance of characteristics such as thinking critically about the whys and wherefores "Why are things organised like this? Can the work be done more efficiently? Why do I work like this?" This definition implies an employee who can distance himself from his work and reflect on it and on the changes that are taking place, instead of one who does what he is expected to do and follows changes uncritically. A personnel manager at a bank underlined the fact that, instead of working harder and harder to meet the increased work pressure, people should in particular learn to work differently. Employees should be able to step back occasionally from their daily routine and devote more attention to self- and time management. A production manager at the cheese factory observed that real craftsmen are not monkeys who can perform tricks but people who contribute ideas towards the process, who reflect on the whys and wherefores, and who can think ahead. A plant manager at the packaging factory commented that real craftsmen can raise work processes and work problems to a higher level and are the employees who like to discuss their knowledge with others. At the organisational level too critical reflection is important. When managers are asked for their definition of 'the learning organisation' they often mention the importance of learning from mistakes. The plant manager of the packaging factory felt that this should not be limited to mistakes inside the company only; complaints from customers should also be handled very carefully. The supervisors of the technical service in the textile-printing factory complained about their mechanics' development. According to them, the mechanics were stuck in hierarchical thinking and did not exercise their own responsibilities sufficiently. As soon as the supervisors tried to delegate responsibilities to them, the mechanics came back to them, asking what they should do. For this reason the supervisors organised a 'wake-up' training, which started by inviting the mechanics to criticise the organisation. Then, the long list of organisational problems that emerged was categorised and reduced to a 'top-seven' by a voting procedure. Subsequently, the problems were assigned to different teams to clarify and to find possible solutions to. This shows the importance they attached to critical reflection, although nobody explicitly mentioned it. Stimulating critical reflection here was a means of improving the performance of both the individual mechanics and the technical service.

This leads one to the conclusion that, for the next phase of this research, one aspect of learning that Marsick and Watkins (1990) distinguished is especially relevant, namely critical reflection. Instead of the concept of flexible craftsmanship, it is rather the concept of critical reflection that may serve as a better, more neutral output measure of on-the-job learning. Moreover, this will lead to a better demarcation of the concept on-the-job learning. The research of Marsick and Watkins (1990) showed that critical reflection enabled people to challenge norms and to examine the assumptions behind their reasoning and actions. They noticed that "people learned best when they were able to ask questions about why they saw the world as they did, whether their thinking was correct, or how they came to believe a perceived truth that they held sacred" (p.220). Critical reflection relates to understanding one's own standards, goals, and interests, and learning about backgrounds, assumptions and performance objectives, aimed at improvement. The concept of double-loop learning that Argyris and Schon (1978) distinguished is also related to critical reflection. Double-loop learning enables workers to identify, question and change the assumptions underlying workplace organisation and patterns of interaction. Workers publicly challenge workplace assumptions and learn to change underlying values. By confronting the basic assumptions behind prevailing organisational norms, values, myths, hierarchies and expectations, workers help prevent stagnation and dysfunctional habits. Brookfield (1987) defined the process of critical thinking as the process by which we detect and analyse the assumptions that underlie the actions, decisions and judgements in our lives. Essentially it has three stages: firstly, becoming aware that these assumptions exist, secondly, making them explicit, and thirdly, assessing their accuracy and validity. Brookfield mentions some characteristics of people who think critically. Critical thinkers display contextual sensitivity, they become aware of how contexts distort the assumptions that we have, and they see that common sense ideas and conventional wisdom are actually the product of a particular time, place and group of people. The ability to engage in perspective-taking is another indicator that critical thinking is taking place. Perspective-taking involves people in entering another person's head, seeing the world as they see it. Tolerance of ambiguity is another important indicator of critical thinking. Tolerance of ambiguity means that people are able to take multiple interpretations of the same situation and are sceptical when others say that there is only one cause of a very complicated problem. Critical thinkers are also people who seek and explore alternative ways of thinking and acting, and do so without the pressure of an immediate crisis. Furthermore, critical thinkers are people who challenge group-think, that is, ideas that a group has accepted as sacrosanct. This also means that critical thinkers are alert to premature ultimates, invocations to higher values. Finally, critical thinkers acknowledge the fact that change is fundamental to life and that the future is open-ended.

Critical reflection did not emerge to the same extent as a crucial concept in all cases. Some examples of these cases are the call centre, the giro bank and The Post Office, where jobs are so routine that critical reflection in a way is discouraged. A personnel manager at the Post Office stressed only critical reflection that refers to the self. This manager stated that employees with critical self-judgement are able to detect their own weak spots (for example in selling) and then to ask for help. Continuous learning presupposes a critical view of one's own functioning and that of others. According to the personnel manager, this requires an acknowledgement of one's own responsibility for acting and learning as well as a willingness to be vulnerable. However, what did appear was that both these organisations and the people who work in them do benefit from employable employees who ask themselves if they really want to follow the changes in their job or if they would not prefer to look for another job (look at paragraph 4.2).This also implies employees who are critically reflective. A concept such as employability therefore may be seen as a consequence of critical reflection.

Critically reflection seems to be a way of learning that brings together the interests of both employers and employees, although some employers prefer employees whose critical thinking is positive, and only want employees to reflect critically on themselves, instead of on the organisation, or restrict the importance of critical reflection on the organisation only to higher levels of management. It seems that the extent to which organisations will acknowledge the importance of critical reflection and benefit from it depends on the characteristics of the organisation, as discussed in paragraph 4.6. The benefits of critical reflection to the employee lie in the critical reflection itself, which gives him a feeling of self-determination and which will help him in career development. For the employer, however, it is the economic value of critical reflection that is of importance. Critical reflection is essential for continuous improvement, quality management and innovation - all matters that are vital in order to survive in a competitive economy.

Motivation for Learning

Learning often means that some aspects of a job will change, and that employees will have to leave behind a way of working that they have been accustomed to, sometimes for twenty years or more. This often proves very difficult for people and takes a lot out of them. This applies especially to shop-floor workers who are selected merely to carry out tasks and follow rules that have been set by others, and not to think too much for themselves. All the cases made it clear that learning not only produces benefits but also entails a great many costs (time, energy, and loss of security if learning was a consequence of job changes). This means that employees need a motivation for investing in the learning process.

The importance that people attach to work in their lives is also of influence on their motivation for learning. Many of those who were interviewed made a distinction between employees who work for the money and then go home to continue their lives, and employees for whom work is more important. A personnel manager at a bank said that some employees simply do not want to invest in their work and to exploit their talent because they see challenges in their personal life, rather than in their working life. Employees at the giro bank and the call centre are mostly women who started working because it was an undemanding job that was easy to combine with their family life.

Since informal on-the-job learning and working are inseparable, the motivation to learn will correspond to the motivation to work. In the motives that emerge from the case studies, it is possible to recognise motivational factors from the theory of self-determination (Deci and Ryan, 1985, Deci and Flaste, 1995) that was validated in business facilities (Deci, 1975) and revalidated by Kleinmann and Straka (1996) This theory expects three motivational factors in workplace conditions to have a distinct impact on employee interest in self-directed learning, namely experience of social integration, experience of autonomy and experience of competence.

People feel socially integrated if they believe that their work is acknowledged by their colleagues and superiors and if they feel integrated in the community of work. One factor that would seem to be an important motivation for both work and on-the-job learning is the fact that work is a social event; the operators and the employees of the giro bank considered this a central aspect of work. The fact that colleagues enthuse each other with a learning attitude was underlined by the production manager at the packaging company. It is, according to him, very important that shop-floor workers have a place that is pleasant, where they can have fun together. On the other hand, employees often resist change because it implies that they will have to work with different people. A bank employee spoke about the days before bank opening hours were extended, when everybody stayed behind after work to let off steam. She always found these times very enjoyable , but nowadays, because opening hours have been extended, everybody rushes straight home after work. This also means that an important moment of collective reflection has disappeared.

People experience autonomy when they have the feeling that they have the scope to act independently and to carry out their work according to their own planning and insights. An operator at the call centre said that the changes taking place in her job are going to make her feel more and more like a robot, which is very demotivating. What was important for her was to 'put something of oneself into the work', for example, by having a pleasant conversation with a customer, or by being able to use her own knowledge and intelligence in the search process. It became apparent from interviews with mechanics in the cheese factory and in the textile-printing factory that the freedom to concentrate work on aspects that have their special personal interest can be a very powerful motivation for working and informal learning. Each mechanic has his own professional hobby and they generally make a division of labour according to this personal interest and expertise. One mechanic in the cheese factory spent many hours of both his leisure time and his time at work writing manuals for computer software so that his colleagues could use them. The fact that employees working for the accommodation services at a bank (which are concerned with moving and arranging workrooms) are able to move freely about the whole building as they see fit gives them a very strong feeling of autonomy, especially when they compare themselves with the desk clerks, who have to sit 'imprisoned' behind their desks all day.

People feel competent if they believe that they can carry out their work successfully and effectively. The work of a packing team supervisor at the packaging factory is quite low skilled, but because her team is the last one in the production line before the products go out to the customer, she feels a sense of achievement when she is able to arrange things at the last minute. A bank employee reported feeling stimulated by the score lists of products sold that are made for each employee, because it gives her an understanding of her own effectiveness. One operator feels successful when she is able to meet the norms for the number of calls handled per hour.

The Influence of Organisational Culture on Critical Reflection

The managers at the cheese factory, the packaging factory and the bank all stressed the fact that the ability to reflect (critically) on one's own performance cannot be seen as an independent variable, since it depends partly on the organisational culture the employees were 'raised' in and the autonomy they have always experienced.

In the cheese factory both the department manager and the foreman reported that shop-floor workers had traditionally been made very dependent on their foreman. If people ever made a mistake they were never trusted again. This can be explained by the fact that the cost of mistakes in the process was very high. When later, more responsibilities were given back to the shop-floor workers, this caused many problems. Direct managers play an important role in this, as they often only think about short-term benefits (running the process with as few problems as possible).

The failure of many attempts to introduce the concept of teamwork may also be ascribed to the fact that many shop-floor workers have learned 'not to think', was the view of a senior training advisor at a bank. At the giro bank employees got so used to their very routine jobs that they were not even able to pass an exam on simple safety training (what to do in the event of a robbery). This was because they simply could not imagine that a robbery might take place. ('In all the 20 years I have worked here no such thing has ever happened.') This leads one to the conclusion that some organisational factors will foster critical reflection, while others will suppress it. Marsick (1987) also argues that some workers have been so conditioned not to raise questions that they may not know how to begin to think critically.

Organisations can foster critical thinking by explicitly rewarding it. At some factories (the packaging factory and the textile-printing factory) a suggestions box is in use. The plant manager at the packaging factory revealed, however, that this does not always work well. In addition to the good ideas that deserve to be rewarded, many suggestions are being submitted out of frustration, or as a result of communication problems with the foreman. "Good teams do not need a suggestions box; they immediately turn ideas into improvements". The plant manager believes that coaching by the foreman is far more effective in fostering critical reflection. A climate of great attentiveness, in which workers with good ideas are (publicly) praised, is vital to the self-confidence that workers need. This will enable those with creative ideas also to function as a role model for their colleagues. The packaging factory organises a special day each year when teams with good ideas regarding improvements are publicly praised.

It is possible to stimulate critical reflection on the shop floor by involving workers in quality assurance systems. The supervisor of the packing department – the last unit in line – at the packaging factory, has a rather routine job, but ever since she became responsible for quality on her unit she has had to take many decisions concerning product quality. The department manager in the cheese factory stressed that involving workers in formulating the procedures is especially important for the learning process. In this factory one manager made the workers responsible for the quality assurance procedures, while the manager of another department did this all himself. The department manager reported that this has produced two different kinds of culture on the shop floor that will remain even after the managers concerned have left. Since employees have learned to think and function independently, it will be easier for the next manager to give them these responsibilities, and so on. Brookfield (1987) put it this way: "when criticism of prevailing workplace norms is encouraged in some form of collective forum, as is advocated by proponents of quality circles, leaps of imagination that take companies beyond currently accepted modes of production are more likely to take place. Critical thinking, then, can be seen as the central element in improving organisational performance."

Critical reflection means learning from mistakes and not being afraid to look at one's weak spots. A personnel manager at a bank reported that 'tolerance towards making mistakes' had recently become company policy and that showing one's vulnerability was being stimulated. The fact that this policy is quite hard to put into practice in a bank, where large amounts of money may be involved, is demonstrated by an employee of that bank, who said that she had not even noticed this shift in company policy. A training manager in the bank also said that showing one's vulnerability is not very easy in a culture where people have their knowledge and competencies to thank for their positions. Many employees hesitate to share their knowledge with others or to ask their colleagues for help (and admit that they themselves do not know). Allowing other people to say what they think of you is a matter of culture, and implies that there has to be a non-threatening environment. The training manager reported that there is no such culture in the Post Office, which can be explained by the hierarchical, civil service culture that had prevailed for so long. Nowadays employees who feel responsible for the whole course of business at a post office are sought after. Good employees, for example, will go and check that there are no packets of chips left on the cash dispenser, or take appropriate steps when promotional campaigns start before the leaflets are available. Each employee has to act as an entrepreneur, but since the organisation has always been very large and bureaucratic, employees have never learned this kind of behaviour. They hide behind their formal tasks and simply pass their responsibilities on to somebody else.

It is remarkable that many of the employees interviewed said that they did not get enough scope to gain a good understanding of the organisation as a whole. This means that workers often do not know in what kind of framework they are operating, which limits their potential for 'double-loop' learning. Communication between different departments of an organisation, including shop-floor workers, plays a vital role in this. In the textile-printing factory efforts are being made to make a transition from 'thinking in departments' to 'thinking in processes'. Workers from all the different supportive departments should become 'partners' of the managers; even other companies may be made partners. The technical department is now cooperating increasingly with the production line; mechanics are becoming more involved in the product, while shop-floor workers are carrying out more and more of the repairs themselves. Communication, however, is a significant problem area in this partnership-thinking. Efforts are being made to have shop-floor workers cooperate with the Research and Development department in innovation processes. One important problem area, however, is the fact that the researchers, who work at a professional level, often think and talk in too abstract a manner to communicate with the workers on the shop floor.

Many supervisors (at the call centre and the textile-printing factory) also stress the importance of communicating company policy to the shop floor. Workers will only be motivated to learn new tasks if they are persuaded by cogent arguments of the necessity for change. A manager at the bank said that as long as new products really are better, bank employees do not mind learning about them, but when they are introduced merely because the competitor also has them, employees grow tired of learning.

The nature of work also has a significant effect on the learning culture. In both the cheese factory and the textile-printing factory the electricians appear to communicate much more with each other than do the mechanics, due to the fact that the work of the former is invisible. The way the work is organised also plays a role. The operators said that they like to think about the mistakes in the computer system they work with, or to invent smart tricks to solve particular problems. However, as soon as the next call comes in, that problem disappears from their computer screen and cannot be retrieved. They find this very frustrating.

Conclusions

The results presented above demonstrate that the concept of 'flexible craftsmanship' is not an effective measure of output for informal on-the-job learning because it takes into account only the employer's view of 'ideal employees'. These results also lead one to the conclusion that a certain form of on-the-job learning (namely critical reflection) may itself serve as a measure of output for further research. This form of learning may be seen not only as a means of achieving a particular objective, but also as a goal in itself, since, according to many respondents, an important characteristic of professionals or 'good' employees is that they learn in a critically reflective way. One other advantage of opting for critical reflection is that this will ensure that the concept of on-the-job learning is demarcated more clearly. Another conclusion is that the critically reflective learning processes of shop-floor workers are influenced by such organisational factors as autonomy, rewards for innovative ideas, tolerance of making mistakes and vulnerability, scope for understanding the organisation as a whole, communication to the shop floor. The next phase of the project will focus on the effect that organisational factors have on critical reflection. Although the prompts to critical thinking most often identified are crises and disorientating dilemma's, it is a mistake to regard critical thinking as occasioned only by trauma (Brookfield, 1987). Moments of sudden insight or self-awareness can also be triggered by events that are fulfilling rather than distressing. It is assumed that part of the effect that organisational factors have on critical reflection will be indirect, via the three motivational factors Deci and Ryan (1985) mention (experience of autonomy, experience of competency and experience of social integration). The characteristics of critical thinkers as mentioned by Brookfield (1987) will be used to make it possible to measure the concept of the critically reflective worker.

Contribution to New Knowledge in HRD

As the transfer of training is a very complex matter, HRD should focus more on how to make use of the informal learning experiences that derive from everyday working life, instead of on formal training. Garrick (1998) states that the debate on informal learning within the fields of management and HRD practice has tended to focus on how informal learning can be enhanced, or what can be done to enable individuals to learn more 'efficiently and effectively' in their day-to-day work. According to Garrick, however, there has been little critique of the uses of informal learning, or of its construction within the master discourse of economic rationalism. This research attempts to break through the biased view of learning organisations taken by management, by illuminating the role of both management and shop-floor workers, and focusing on the value of critical reflection to both the organisation and the individual. Another contribution of this research to new knowledge in HRD is that it focuses not on critical reflection of professionals, but rather on that of shop-floor workers.

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Utilizing Electronic Mail to Survey Human Resource Development Practitioners: A Comparison Between Electronic Mail and the U.S. Postal Service for the Purpose of Data Collection: Reducing the Costs of Bureaucracy

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Electronic mail (E-mail) has enabled researchers to collect data systematically from any location in the world in seconds, and charges for online services have been less than for postage and free to educational users. E-mail was utilized to solicit and collect data as part of a study of transfer of training strategies among industry trainers and supervisors. The findings hold implications for HRD researchers using E-Mail to collect data.

Keywords: E-Mail, Data, Collection

The utilization of the U.S. Postal Service (regular mail) has been more costly than the utilization of E-mail for data collection. Preparing a document for regular mail has been more difficult to edit and analyze, change, and sort than preparing a document for E-mail. Regular mail has also taken longer to deliver than E-mail. According to Thach (1995) response rates to surveys have been considerably lower using regular mail than with E-mail. Other problems found in using regular mail have included less honesty of responses and slower responses than E-mail.

Utilization of E-Mail

E-mail has allowed users with a computer, a modem, and an on-line service to transmit and receive information from virtually anyplace in the world (Steinfield, 1990; Zuboff, 1988). When utilizing E-mail for survey research, the user has been able to collect data systematically by composing questionnaires and delivering them to an online sample of the population. Respondents could then receive, complete, and return the questionnaire via E-mail. Research utilizing E-mail for data collection has been projected to increase because of the growth of online services throughout the world (Thach, 1995).

Strategies for Using E-Mail

E-mail has had four important features that make it useful for survey research:

1. 1.Messages could be transmitted to any location in the world in seconds (depending on the scope of the network).
2. Messages could be sent, read, and replied to at the convenience of the user. Participants could take their time to think about their response and answer when they were ready.
3. The intended receiver has normally been the only person who read the messages. Typically, there have been no secretaries or office personnel opening or sorting mail (there has been some change in larger organizations, however, where executives received over 100 E-mails per day and secretaries have been required to sort them). However, E-mails have had a better chance of being opened and read by the intended receiver than traditional mail might (Sproull, 1986).
4. E-mail messages have not required a hard copy, adding an ephemeral quality to E-mail that could not be duplicated by traditional mail. E-mail messages could be saved and printed to a hard copy at the discretion of the receiver (Sproull, 1986).

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Limitations in Use of E-mail

The use of E-mail has been limited to populations who had access to the equipment required and had the knowledge to use the equipment. However, as technology improved and equipment costs and online fees have fallen, more diverse populations have had access to E-mail (Thach, 1995). Utilizing E-mail for research has had some potential problems, however. Data could be lost due to software or hardware problems. To overcome these types of problems, it has been considered prudent to make back-up copies of files (Synodinos & Brennan, 1988). As illustrated in Figure 1, Thach (1995) listed the advantages and disadvantages of using E-mail for mail surveys.

Technology has increased user expectations of format issues such as color, spacing, and location of items. These issues, on the other hand, were more easily addressed because of the possibility of sending colored surveys complete with graphics to users on networks for less than the cost to reproduce and mail colored copies of paper surveys. Technology has created more potential for development of effective questionnaire layouts and presentations in the future (Thach, 1995).

Advantages	Disadvantages
Cost-savings—less expensive to send questionnaires over online network than to pay postage for paper questionnaires or interviewers salaries.	Sample demographic limitations— population and sample are limited to those with access to a computer and online network.
Ease of editing/analysis—simpler to make changes to questionnaire after pretesting and easier to copy and sort data, since it doesn't have to be re-typed.	Lower levels of confidentiality—due to the open nature of most online networks, it is difficult to guarantee anonymity and confidentiality.
Faster transmission time—questionnaires can be delivered to recipient in virtually seconds, rather than days as with traditional mail.	Layout and presentation issues— constructing the format of a computer questionnaire can be more difficult the first few times, due to lack of experience for some researchers.
Easy use of preletters (invitations) — invitations to participate can be sent and responded to in a very short time, thus providing the researcher with an estimate of the participation level.	Additional orientation/instructions—extra instructions and even orientation to the computer and online system may be necessary in order for respondents to complete the questionnaire online.
Higher response rate—research shows that response rates on private networks are higher with electronic surveys than with paper surveys.	Potential technical problems with hardware and software
More candid responses—research shows that respondents will answer more honestly with electronic surveys than with paper surveys or in interviews.	
Potentially quicker response time with wider magnitude of coverage—due to the speed of online networks, participants can answer in virtually minutes or hours, and coverage can be global.	

Figure 1 Advantages and Disadvantages of Electronic Mail Surveys
Thach, L. (1995). Using electronic mail to conduct survey research. Educational Technology, 35 (2), 31.

Pretests

Pretests (pilot or field tests) could be sent directly to a small pilot group of users at virtually no cost and returned with suggested revisions in the same manner. Editing and revisions were also quicker than with hard copy, because the questionnaire was already developed using a computer format. Any changes could be made directly on the screen (Kiesler & Sproull, 1986; Synodinos & Brennan, 1988).

Confidentiality

Confidentiality has been an important issue in using E-mail surveys. Because electronic networks have been open in nature, it has been more difficult to guarantee anonymity or confidentiality to respondents than with regular mail surveys (Price, 1975). Most online services sent the E-mail respondents' E-mail address along with the survey response, allowing the researcher to know who responded and how. Although this eliminated anonymity, it did not preclude confidentiality (Thach, 1995). In an anonymous questionnaire, no one knew the name of the respondent, not even the researcher. Confidentiality, however, has implied a promise that the researcher would keep the name and responses of the respondent confidential (Berdoe et al., 1986).

Cost-Saving

When surveys have been implemented online, postage fees have been avoided. Charges for online services have been less than for postage, and educational users of the Internet have not been charged for personal use time (Thach, 1995). Kiesler and Sproull (1986) reported that the cost-savings benefits of using E-mail for research will be one of the major reasons for the growth of E-mail in the future.

Response Findings

Response rates for E-mail have generally been found to be positive (Thach, 1995). Sproull (1986) found response rates from E-mail surveys to be 20% higher than hard-copy mail questionnaires.

Kiesler and Sproull (1986) found that E-mail respondents answered more items and made fewer mistakes on the questionnaire than their typical mail counterpart. In a later study, Walsh et al. (1992) achieved a 76% response rate to their E-mail survey using a random sample. That improved to a 96% response rate when a self-selecting group was surveyed. Online questionnaires have proved to improve speed of transmission. Rather than waiting for surveys to arrive by traditional mail, the online questionnaire could be delivered in virtually seconds (Sproull, 1986; Synodinos & Brennan, 1988).

Candid Responses

Kiesler and Sproull (1986) found that respondents tended to answer more honestly and with fewer social inhibitions than did comparison groups who answered paper questionnaires and/or face-to-face interviews. It was suggested that this type of candid response is due to the shielding of social context of traditional communication. Many users have had the option of using alias E-mail address names which allowed them to disguise their identity. Although these same attributes were true of paper questionnaires, E-mail elicited more candor (Sproull, 1986; Synodinos & Brennan, 1988).

Speed and Magnitude

Speed and magnitude of coverage of response rates have been much better than traditional paper questionnaires and interviews largely because of the large number of people on private online networks and the ability to send a large number of questionnaires out very quickly (Thach, 1995). The magnitude of E-mail has been growing to the point where many networks could reach remote locations around the world and receive responses in seconds (Walsh et al., 1992).

Research Questions

1. Is there a significant difference between results from surveys sent by E-Mail and surveys sent by regular mail?
2. Is there a significant difference between results from surveys sent by E-Mail and surveys sent by the U.S. Postal Service with respect to the gender of the respondent?
3. Is there a significant difference between results from surveys sent by E-Mail and surveys sent by the U.S. Postal Service with respect to the experience as a human resource development professional of the respondent?

Methodology

Based on the findings in the literature, E-mail was utilized to solicit and collect data as part of a study of transfer of training strategies among industry trainers and supervisors who were members of the American Society for Training and Development (ASTD).

The ASTD was chosen for this study of trainers and supervisors because of its claim of a membership of over 70,000 professionals in the area of training and development throughout the United States and other countries. ASTD has supported (a) professional growth and learning, (b) leadership skill development, (c) networking opportunities, (d) useful current information, and (e) training career opportunities for trainers, supervisors, and others in related professions.

Sampling Method

The sample used in this study was selected from a randomized list of trainers and supervisors provided by ASTD during the summer of 1998. Krejcie's and Morgan's (1970) Table for determining sample size from a given population was used to determine the sample size of 383 trainers and supervisors.

Response Rate

Out of the 383 subjects (383 original subjects less 35 subjects who stated that they were not interested in the study), 118 were completed and returned. Of the 118 returns, 7 were unusable, leaving 111 usable responses, yielding an overall 29% usable response rate.

Prior to the actual survey a pre-survey letter requesting participation was sent. From that request, 92 respondents indicated interest in taking part in the study, 35 respondents indicated that they were not interested in taking part in the study, and 205 were returned as undeliverable. Fifty-one subjects received the pre-survey letter but did not respond.

Of the 348 subjects remaining, the survey was sent via E-mail to 143 subjects (92 who had agreed to participate and 51 who did not respond), and 205 were sent via regular mail to the undeliverable E-mail group. Of the responses 59 were returned from the E-mail surveys (41% response rate) and 52 were returned from regular mail (25% response rate).

Results and Findings

Research Question One

Research question number one: Is there a significant difference between results from surveys sent by E-Mail and
surveys sent by regular mail?

Total responses from each respondent group (E-Mail group and regular mail group) were compared to the non-respondents. A Chi Square was used to compare the respondents from the E-Mail surveys, the respondents from regular mail surveys, the non-respondents from the E-Mail surveys, and the non-respondents from regular mail surveys. Table 1 displays the actual response rates for E-Mail returned, not returned and total and for regular mail returned, not returned and total. The respondents from the E-Mail surveys were found to be significantly greater than the respondents from regular mail (2, 205) $X^2 = 9.795$, $p = .002$.

Table 1
Rates of Return from E-Mail and Regular mail Surveys

	Returned	Not Returned	Total
E-Mail	59	84	143
Regular Mail	52	153	205
Totals	111	237	348

$X^2 = 9.795$, N= 348, df = 1, p = .002

Research Question Two

Research question number two: Is there a significant difference between results from surveys sent by E-Mail and surveys sent by the U.S. Postal Service with respect to the gender of the respondent?

Mean scores for each respondent group and combined mean scores were used to determine any differences in responses with respect to the gender of the respondent. A Chi-Square was used to compare the mean scores of the respondents who indicated that they were female to the respondents who indicated that they were male. There was no significant difference between the responses of the females and the males. F (1.107) p = .075.

Research Question Three

Research question number three: Is there a significant difference between results from surveys sent by E-Mail and surveys sent by the U.S. Postal Service with respect to the experience as a human resource development professional of the respondent?

Mean scores for each respondent group and combined mean scores were used to determine any differences in responses with respect to the experience as a human resource development professional of the respondent. A Chi-Square was used to compare the mean scores of the respondents among the four experience groups (less than 3 years, 4 to 8 years, 9 to 15 years, and over 15 years). There was no significant difference between the responses of the four groups. F (3.107) p = .875.

Conclusions

The higher rate of response from the overall E-mail surveys (41% compared to 25% from regular mail surveys [a 64% improvement]) heavily exceeds Sproull's (1986) findings that response rates from E-mail surveys were 20% higher than hard-copy mail questionnaires.

However, the findings did not support Walsh et al's (1993) findings of 76% and 96% response rates from E-mail surveys. As the literature suggested, when surveys have been implemented online, postage fees have been avoided, charges for online services have been less than for postage, and educational users of the Internet have not been charged for personal use time (Thach, 1995). Kiesler and Sproull (1986) reported that the cost-savings benefits of using E-mail for research will be one of the major reasons for the growth of E-mail in the future.

Recommendations

Based on the findings of this study and from the studies of Sproull (1986) and Brennan (1988), E-mail data collection results would yield response rates similar to those of Walsh et al (1993) by (a) sending an E-mail letter to all subjects in the population who have E-Mail addresses asking them if they are interesting in participating, and (b) randomly selecting the desired sample size from those who agreed to participate.

New Knowledge for Human Resource Development Researchers

Utilizing E-mail for data collection, HRD researchers would be able to (a) improve response rates, (b) collect data in a timely manner, (c) collect data at a lower cost than other methods. Other benefits discussed in the literature review should also be considered.

HRD researchers using E-Mail to collect data are not restricted to the same limitations of sample size that might be experienced using regular mail. Utilizing E-Mail to conduct surveys saves time in preparing multiple mailings, collecting data, and conducting follow-up mailings; saves paper and envelopes to enable hard copies of mailing materials; and saves postage.

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Trends in the Literature: A Comparative Analysis of 1998 HRD Research

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Contributions of the literature of the field are significant indicators of trends in the profession. Evidence of the direction of the field is presented in a qualitative analysis of the HRD articles published in 1998. The types of research articles and the sources of studies are compared similarly to the previous work of Hixon and McClernon (1999), and are classified by research journals, research methodologies, analytical and statistical tools, and organizational participants.

Keywords: HRD Research, HRD Research Trends, HRD Literature

This analysis is focused on journal articles that report research meaningful to both the theorist and the workplace learning professional, a category that has appeal to scholar-practitioners (Ruona, 1998; Leimbach, 1997; McClean, 1997; Watkins, 1994). The review extends the earlier analysis by Hixon and McClernon (1999) of research articles considered for a major award given by a professional association in the field of HRD. The review demonstrates the continuing increase in the rate of publication for HRD articles across a broad range of journals in related fields. Following a discussion of context and the rationale for such analyses, we describe methods used for this analysis and strategies employed in identification of articles to be included in the pool of research articles considered for the award. We then present and interpret our findings.

Context and Rationale

Human Resource Development (HRD) has established itself as a professional field with its own theory base, research and practice. It is ". . . a process of developing and/or unleashing human expertise through organization development (OD) and personnel training and development (T&D) for the purpose of improving performance" (Swanson, 1998). The literature of the field is a meaningful gauge of trends in this profession which has comprised the development of the individual, the group and the organization with a focus on relevant business results. HRD research is often published across a broad range of articles in journals associated with a variety of disciplines. An inventory of journals that published HRD research articles grew from twelve for the period 1990-1994 to twenty-two as identified by Sleezer and Sleezer in 1997, and reviewed by Hixon and McClernon in 1999. This indicator alone demonstrates an increase in the attention to the field by refereed research journals.

Scholars in the field have also paid attention to systematizing the process of review. By building on the work of Arnold (1996) and the Sleezers (1997), Hixon and McClernon provided a more consistent picture of the emerging field. Those authors categorized not only the research journals, but also the percentages of research articles by type, and the number of studies by participant source. They were therefore able to conclude that more HRD research was published in 1997; that a variety of journals published the articles; and that the relative types of research differed from those reported in previous studies (although not necessarily a trend). Their research also suggested to them that a more concise and comprehensive definition of HRD would result in the identification of literature that is more relevant to the field. The work of identifying and classifying the literature is continued by the present study. A comparative analysis of the HRD research literature published in 1998 has been analyzed and is reported here using the framework developed by previous authors.

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Purpose and Methods

The purpose of this study is to review and report trends in HRD research literature that is interest to scholar-practitioners and that has been published in scholarly journals in 1998. Donavan screened and collected articles as the first phase of a search for research articles in HRD to be considered for a prestigious professional association award. Content analysis was used to determine similarities and differences to the findings of Sleezer and Sleezer (1997) and Hixon and McClernon (1999) as to: the research journals, types of research articles, the sources of studies, research methodologies, analytical and statistical tools, and organizational participants represented by the articles published.

The researchers employed content analysis to develop an integrative view of the trends in the HRD research articles published in 1998 that were considered for this award, and to then compare the results with previously published studies of similar HRD research. To achieve this goal, the literature was inventoried, and research articles were surveyed and categorized. Data collected for each article included in the review were: the research journal in which it was published, the institutional source of the study, the research methodology and tools applied, and the keywords used to describe the article. The resulting data have been analyzed and interpreted.

Inventory of the Literature

In order to systematically compare the 1998 HRD research to studies collected and analyzed in 1997 and prior years, the literature was selected for review using the criteria established by Hixon and McClernon (1999):

(1) The article was published in a refereed journal in [1998];
(2) The article addressed the practical implications of some issue of relevance to the practice of workplace learning and performance;
(3) The article was published in English;
(4) The article reflected systematic research;
(5) The article fit with Swanson's (1998a) definition [of HRD].

The process of identifying the research articles began with ABI/Inform, ERIC, and PsychLit, the same sources used by the Sleezers (1997), and Hixon and McClernon (1998), to review the journals previously surveyed. The abstracts and articles were matched to the criteria listed above. Additionally, Donavan used ProQuest and Article First to locate articles in journals not formerly referenced. The tables of contents of copies of journals suggested by members of the community of HRD academics and practitioners were manually examined as well.

Keywords that were used to search the databases came from HRD, OD, and T&D. The terms included: change management, employee development, human resource, human resource development, learning, management development, organizational behavior, organizational change, organizational learning, performance, research, return on investment, studies, training and development, transition, workplace learning.

A total of 101 potential articles were identified in 21 journals from all database and manual searches conducted. For those journals not previously known to be refereed, ProQuest was used to determine that criterion. In some instances, it was necessary to read the contributor guidelines to confirm that the journal was refereed. When Swanson's definition was applied, a total of 97 research articles in 15 journals proved to be relevant.

Categorizing the Articles

As each article was read, Donovan classified the article by journal title, the participant source, the research methodology and tools used, and the subject of the research. As had been previously done, the list of journals were compared to previous ones, first to Hixon and McClernon (1999) and then to Sleezer and Sleezer (1997). The types of research were matched to Arnold's (1996) typology. The industry or participant group was classified along similar lines to those used by Hixon and McClernon (1999). A new category, the occurrence of certain keywords to describe the articles in particular journals, was added in this study. The process of categorization did not involve other criteria such as quality of the research, length of the article, or whom the researchers were.

Findings

Analysis of findings yielded a comparison of current and previous journals reviewed and a list showing the distribution of research articles according to Arnold's (1996) typology and compared to Arnold's (1996), Sleezer and Sleezer's (1997) and Hixon and McClernon's (1999) data. The analysis highlights the number of studies by industry or participant source, similarly compared to data from the studies completed by Arnold (1996) and by Hixon and McClernon (199). In addition, a new analysis has been done of the areas of focus of the research.

Table 1. Comparison of HRD Research Articles in 1997 and 1998 Study Data Bases

Journal	Number of HRD Research Articles Published in 1998	Number of HRD Research Articles Published in 1997[1]
Adult Education Quarterly**	6	
Academy of Management Journal ++		1
The Academy of Management Review	0	1
Applied Psychology: An International Review ++		1
Educational Psychology ++		1
European Journal of Operational Research**	1	
Group & Organization Management	0	4
Human Relations	11	4
Human Resource Development Quarterly	16	7
Human Resource Management	4	1
Industrial Relations	0	3
International Studies of Management & Organization**	4	
Journal of Applied Psychology	5	4
Journal of Applied Behavioral Science	7	5
Journal of European Industrial Training ++		1
Journal of Management**	0	
Journal of Organizational Behavior	8	7
Journal of Vocational Behavior	0	5
Management Learning**	4	
Management Science**	3	
National Productivity Review ++		1
Organization Development Journal ++	0	4
Organizational Dynamics	8	1
Organization Studies	5	3
Performance Improvement Quarterly	10	4
Personnel Psychology	5	3
Public Administration Quarterly ++		2
Public Administration Review**	0	
Public Personnel Management ++		2
Training Research Journal ++		1
TOTAL ARTICLES	97	66

[1] Hixon & McClernon (1999)
**Not included in a previous study.
++Not included in this study.

Data analysis has resulted in a report of the distribution of HRD research articles by journal as shown in Table 1, which includes both the 1997 and 1998 data. The journals that published HRD research in 1998 included Human Resource Development Quarterly, Human Relations, Performance Improvement Quarterly, Journal of Organizational Behavior, Organizational Dynamics, Journal of Applied Behavioral Science, Adult Education Quarterly, Journal of Applied Psychology, Organization Studies, Personnel Psychology. The number of articles published in each journal included (or omitted) from the 1999 and current studies is shown.

We repeat the caution here of Hixon and McClernon (1999) who noted that their study was not an exact replication of those previously conducted. This study, as well, differs from the others. It has used the same criteria for article selection, but the journals included in the study are not identical to those reviewed in either the 1997 study by the Sleezers or the 1999 work of Hixon and McClernon. As can be seen in Table 1, additional new journals in this review focused on adult and management learning, as well as on international studies. However, some journals not included were also international; several journals in 1997 that were not included here focused on public administration.

Type of Research

Each of the articles identified was categorized according to the typology of Arnold (1996). He characterized research using four classes: field or lab experiments, descriptive case of field studies, library research/speculative, and theoretical model or instrument construction. Among the 1998 articles analyzed, the distribution among these classes were: 11 field or lab experiments; 58 descriptive case or field studies; 15 library research/speculative studies; and 13 works on theoretical model or instrument construction.

A comparison of the occurrence of each type of research in Arnold's study (1996), Hixon & McClernon's study (1999), and the current study are shown in Table 2. Of the 1998 articles reviewed, 11% of the articles were field or lab experiments, as compared to 7% in 1996 and 20% in 1997; 60% were descriptive case or field studies, as compared to 53% in 1996 and 65% in 1997; 16% were library research or speculative, as compared to 35% in 1996 and 12% in 1997; and 13% were theoretical model or instrument construction, as compared to 5% in 1996 and 3% in 1997. The differences noted in the numbers of studies in each category to the previous year are not as marked as those found by Hixon & McClernon (1999). Experiments seem to be moving downward; and there are slight increases or decreases for field studies and library / speculative research. The largest increase is in theoretical model or instrument construction. As has been stated before, the selection of journals and the bias of the reviewers may account for the magnitude of these increases or decreases.

Table 2. Percentages of Research Articles by Type in 1996, 1997, and 1998 Study Data Bases

Research Type	Articles in Arnold's Study [1]	Articles in Hixon & McClernon's Study [2]	Articles in 1998
Field or Lab Experiments	7%	20%	11%
Descriptive Case or Field Studies	53%	65%	60%
Library Research/Speculative	35%	12%	16%
Theoretical Model or Instrument Construction	5%	3%	13%
TOTAL	100%	100%	100%

[1] Arnold (1996) p. 819

[2] Hixon & McClernon (1999) p. 900

Qualitative vs. Quantitative Research

The next analysis of the research studies determined whether the type of data, methods and tools were oriented to qualitative or quantitative research. A total of 46 articles reported using qualitative measures; that represented 47% of the studies. Quantitative measures were used by 51 of the studies; or 52% of the researchers. This is somewhat of a decrease in quantitative studies from Hixon & McClernon (1999) who had found 68% of the studies in 1997 to be quantitative and 32% to be qualitative. The vast majority of the current qualitative research were primarily interview studies and case studies. This may reflect an increased intellectual interest in constructivism and post-modernism which pay close attention to context and to the meaning that people make of their unique situations.

The quantitative studies were categorized using Arnold's (1996) list of methods: factor analysis, Chi square, ANOVA, correlation, means, proportions, variance and none. Of the quantitative studies reviewed most relied on simple measures such as means and variance. Factor analysis was used by 10 studies; ANOVA by 11; correlation by 25; and complex measures by 4.

Research Settings and Focus

Research setting and focus of articles reviewed in 1998 could, in part, be influenced by the selection of journals for review. Table 3 shows a comparison of number and percentage of studies by setting. A total of 59.8% of the articles reviewed in 1998 reported on studies conducted in business and industry, which is a large increase from Hixon and McClernon's (1999) review of 1997 research. Mixed organization types (combinations of business, education, government agencies) were used for 10.3% of the studies. Higher education accounted for 7.2% of the research reported. A total of 7.2% of the studies were done in governmental agencies. Another 7.2% of the articles reported no subject audience. The remaining 8% of the research articles included studies conducted in professional services organizations, healthcare settings, non-profits, and the community.

Table 3. Comparison of Number of Studies by Setting

Setting	Articles in 1998		Articles in 1997[1]	
	Number	Percent	Number	Percent
Business/Industry	58	59.8%	22	33.3%
Mixed Organizations	10	10.3%	5	7.8%
Education	7	7.2%	9	13.6%
Government	7	7.2%	9	13.6%
Unknown	7	7.2%	8	12.1%
Professionals	3	3.1%	2	3%
Healthcare	2	2.1%	2	3%
Non-profits	2	2.1%	0	
Community	1	1.0%	0	
Military	0		3	4.5%
Financial	0		4	6.1%
Proprietary Education	0		2	3%
TOTAL	97	100%	66	100%

[1] Hixon & McClernon (1999)

The research reported in 1998 was conducted in a variety of countries although the overwhelming majority (about 85%) of articles focused on studies completed in the United States. The remaining 15% of the articles reported research from the following regions of the world (in order of frequency): Western Europe, primarily the UK; Eastern Europe, including Hungary, Poland and Russia; Canada; the Far East, including China and Japan; and Northern Europe.

The research studies reviewed in 1998 focused largely on employees across the organization, from senior management and entrepreneurs to new hires. Table 4 articles shows the distribution of articles by area of focus using the following categories: learning theory and practice, performance, managerial behavior, change, diversity, business development, leadership development and practice, learning organization, technology, organizational culture, human resource development, instructional design, return on investment, and knowledge management.

Table 4. Percentages of Research Articles by Focus

Area of Focus	% of Articles
Learning Theory and Practice	22%
Performance	14%
Managerial Behavior	11%
Change	9%
Diversity	9%
Business Development	8%
Leadership Development and Practice	8%
Learning Organization	5%
Technology	4%
Organizational Culture	3%
Human Resource Development	2%
Instructional Design	2%
Return On Investment	2%
Knowledge Management	1%
TOTAL	100%

Discussion

The status of HRD research has been reviewed in this study. With the insights gleaned from this review, our comments will fall into two broad areas the state of HRD research as reviewed here and the limitations and difficulties of a study such as this one.

It seems that the amount of published research continues to grow, and that the number of journals that include HRD research have expanded. One cannot infer too much regarding trends from such a limited data set, especially given the differences between the data base of journals for 1997 and 1998. A few clear trends seem to stand out, most notable among them being the increase in number of studies in business and industry; and the paucity of research in English outside of the United States.

However, numbers alone do not tell the story of research in Human Resource Development. There is some variance in the nature and focus of the studies conducted, although it is difficult to say why these differences exist or to be sure that they are not due to the nature of the sample. On the other hand, studies of interest to scholar practitioners are bound to be sensitive to rapid environmental changes that might explain an interest in contextualized studies that provide descriptive analyses of forces within a given industry, sector, or employee base. Such exploratory research may eventually give rise to cross-case analysis. Additionally, postmodernism calls into question the very possibility of conducting large-scale causal studies with high levels of cross-context explanatory power.

Although findings with respect to setting and focus may well be influenced by the choice of journals, this analysis reports an increase in research with a focus on business and industry along with continued interest in studies in other settings. A decrease in the number of journals reviewed in the area of public administration may well account for the drop in studies considered here in the public and not-for-profit sector. One can speculate that the increase of interest in HRD in business and industry is caused by positive factors, such as an increase in understanding of the field of HRD and its potential for positive impact on business results; or the increasing influence of HRD practitioners, consulting both internally and externally; or the availability of resources for research given the strong economy. It is also possible that funding for HRD research is not as available in the other sectors. Or that the number of practitioners working in those sectors is somewhat lower. Nevertheless, there are practical implications in many sectors and settings related to issues significant to the practice of workplace learning and performance. Is it possible that scholars in HRD are focusing more attention on sectors that promise more lucrative work? On the other hand, are there other reasons for the distribution of research studies? If so, what are they?

Continuing challenges to literature review in the field of Human Resource Development have become evident to the researchers involved in the current and previous studies. From our vantage point they can be grouped in three realms. The first of these is related to publication and availability of refereed journals. The second results from inadequate abstracts and the wide variance in the selection of keywords that identify articles. The final challenge is the experience and professional interests of the researcher.

Any comparative literature search of HRD articles to survey the work of the field is affected by the accessibility of journals and the availability of articles. The issues that appear to impact access are continued publication of the journal and the role of academic libraries in providing online or paper subscriptions. Several journals included in the 1997 and 1998 studies did not appear in library databases as this research was conducted. Individual academic libraries may subscribe to a limited number of publications. Contractual agreements prevent interlibrary loan of more than a single article from one issue of a journal.

The online research resources include, at the disposition of publishers, a citation, and/or abstract and/or full-text for an article. Authoring an abstract is an inexact process at best. In the early stages of this research, abstracts of more than 50 articles, for which full-text was not available online, were earmarked for possible inclusion in the study. Fewer than ten of those abstracts represented articles that met the criteria established. Most often the abstract did not differentiate a field or descriptive study from a theoretical article; or a position paper from model building. Literature studies were not distinguished from those involving human subjects. These shortcomings can easily result in the omission of articles when initial selection depends upon an abstract.

Researcher experience and professional interests are limitations that affect literature review as well. Special interests, previous research and practice often expose HRD scholars to certain segments of the field. In doing so, they are prone to recognize certain terminology, be aware of emerging trends, and examine particular literature. At the same time, other terms, trends and publications may lie outside of their practice. The selection of articles for inclusion in a study such as this is thus necessarily subjective.

Conclusions

Human Resource Development has made strong inroads as an area of professional practice. The field continues to use both qualitative and quantitative tools in a relatively equal balance. An increase of 50% in the number of published articles in the field occurred in one year. As the balance of interests and sources of research continue to evolve, we support continued process of self-examination. We must know more about the sponsors and venues that make research possible, and about the journals that are willing to publish it. We encourage future researchers to study the types of research being done, and to analyze those data in both comparative and in new ways. Both annual and five-year reviews would be beneficial to members of the field of Human Resource Development.

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Reflection-in-Action of a Research Partnership

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In an applied field like HRD it is vital that practioners be active participators in the research enterprise. To ensure that participation, HRD professionals must continue to explore and address the multitude of challenges inherent in research/practice collaborations. This paper reports two researchers' reflection-in-action during a 2+ year research partnership, and outlines learning points they have identified as key to successful research partnership projects.

Keywords: Partnership research, Theory-to-practice

It is commonly agreed upon that Human Resource Development (HRD) is an applied field driven by its practice. In recent years, there has been much lament about the disconnect between theory and practice, yet this gap only seems to be widening as the pace of organizations today steadily increases and theory continues to be labeled as invaluable for the practical problems that organizations face. Although this problem is extraordinarily multi-faceted, a certain contributing factor is the extent to which academics and practioners partner together to conduct HRD research.

Research and practice must be more strongly linked to ensure a solid foundation on which the field can build and be more successful in achieving its goals. Modern views of the relationship between theory and practice have helped to downplay, and many would argue entirely remove, the superiority of theory to practice. Rather, practice is and should be viewed as the starting and ending place for research. Carr (1980) urges us to no longer view "practioners as objects for theoretical inspection or as clients who accept and apply theoretical solutions" (p. 67), but rather to recognize that it is their "...active participation in the theoretical enterprise that is an indispensable necessity" (p. 67). Carr and Kemmis (1986) urge us to take a praxiological view of theory and practice—they are dialectically related and "to be understood as mutually constitutive, as a process of interaction which is a continual reconstruction of thought and action" (p. 34). In order to garner the active participation of HRD practioners in building and then using HRD research/theory, HRD professionals (both academics and practioners) must make great strides in improving the design and implementation of successful research-practice partnerships.

It is quite possible that the field's professionals need new models on which to build a solid research and practice partnership. One of the major contributors doing work to lessen the gap between research and practice has been Jacobs (1996, 1997, 1999) who is developing a model for partnership research, which he defines as the "process of improving HRD practice through research" (Jacobs, 1999, p. 874). With each revision of this evolving model HRD professionals are offered more specific advice on how to collaborate using a different model than that which has been commonly accepted and employed in past HRD research. The real emphasis of this model thus far has been on collaboratively defining a research study out of problems found in organizations.

Less work has been done around exploring the multitude of challenges inherent in research/practice collaborations. Leimbach's and McLean's rousing 1997 Academy of Human Resource Development (AHRD) town forum provided some insight into perceived challenges through both the eyes of the practitioner and the academic. Bassi (1996) also contributed in this vein in identifying motivations for partnering as well as "Deal Makers" and "Deal breakers" (p. 709). Nimtz, Coscarelli, and Blair (1996), Jacobs and Moore (1998) and Kehrhahn and Verrilli (1999) have all recently offered systematic case studies of corporate-university partnerships.

While a handful of other studies of HRD-specific research partnerships exist, and even many more within the broader social sciences, there is an on-going need to continue to surface and share critical reflections and lessons being learned by research partners. Bassi (1996) stated, "before developing a set of principles for guiding partnership research, it is useful to delineate the perils and opportunities inherent in partnerships" (p. 707). As a field, HRD must continue to expand its understanding of the unique challenges being faced by HRD researchers and practitioners attempting to partner to address organizational problems as well as to produce valuable research.

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Purpose of this Study

The purpose of this study is to contribute towards the effort of understanding more about research and practice partnerships in HRD. This paper will describe and document the course of a 2+ year research collaboration, exploring challenges faced, what was achieved, and key lessons learned from both the perspectives of the academic and the practitioner.

Methodology

The researchers, one a University professor and the other the Head of HRD Consultancy for a large British public-sector organization, began a partnership to address an emerging organizational problem as well as to conduct HRD research beginning first quarter, 1998. Parallel to this research, the authors studied the partnership itself. Each of these efforts is briefly described below.

The Research Project

The authors collaborated as part of an effort to contribute to the validation of an instrument entitled The Learning Transfer System Inventory (LTSI) (Holton, Bates, Ruona, Leimbach, 1998). During May to September 1998, the LTSI was administered in 40 non-residential, non-mandatory training courses that were at least one-day-long. Those courses were mainly "soft skills" and statistics. In total, 330 trainees were invited to complete the instrument, and 182 complied (a response rate of 55 per cent). Results of the inventory were analyzed and fed-back to the organization during late-1998 and early-1999. Efforts to act on the results of the LTSI are currently being developed and implemented throughout the organization.

Reflection on the Partnership

In 1983, Schön introduced the notion of an epistemology of practice manifested through reflection-in-action. Reflection-in-action is based on the premise that knowing is tacit and demands critical analysis and reflection to turn thinking back into action. Usher and Bryant (1987) describe how the professional employs reflection to:

> ...bring to the surface the implicit and tacit knowledge in the action which is integrated with that action and its outcome. The process involves an integral relationship between understanding (thinking), action (doing), and change. It is transactive in that an attempt to understand a situation through action leads to changes in the situation which themselves generate new understandings and renewed actions.... The metaphorical nature of the understanding enables problematic situations to be coped with by relating them to experience.... As a result, new knowledge is being generated. (p. 205)

The purpose of this study was simply to share practice-derived knowledge that was gained through the course of this research partnership by these two research partners. During the past two years, the authors have engaged in reflective analysis (Boxer, 1985) about the partnership itself parallel to the LTSI project. Data was gathered through observation, dialoguing with each other (typically followed-up by written notes), exchanging e-mails, and each research partner keeping periodic personal journals. The researchers actively discussed, framed, and interpreted activities and results associated with the project and the partnership. These discussions plus any existing notes and documents were then analyzed to extract key themes that are detailed below.

The two-fold aim of our reflection-in-action was to (1) improve the LTSI research and the research partnership itself throughout the course of this still evolving partnership as well as to (2) more consciously analyze and document the partnership and the lessons that were being learned about conducting research in a practical setting. Schön (1983) explains that reflection-in-action is bounded by the "action present, the zone of time in which action can still make a difference in the situation" (p. 62). Much of what is shared in the next section of this paper did indeed impact the LTSI project directly as well as the nature of the research partnership at the time. Other lessons shared here bear witness to fresher learnings that we hope will impact our future actions as we continue to push the "reflective envelope" and the research agenda within the host organization.

Results

The reflection and analysis of the two-year partnership identified three broad themes of learning points. These were: (1) involvement and understanding within the organization (dealing with stakeholder groups, education, language, and champions); (2) designing research for practice (linking to existing systems and strategies; and strategies for marketing, dissemination, and implementation); and (3) partnering for success (partnership objectives, relations, opportunities, and challenges). These are all explored in the following sections.

Involvement and Understanding within the Organization

This research project highlighted the importance of key stakeholder ownership, their understanding of the research process, and their need for assistance when interpreting and using the research results.

Stakeholder groups. There were several key stakeholder groups for the LTSI project, other than the two researchers. Within the HRD department were trainers who would administer the instrument, HRD managers responsible for funding the project, and administrators responsible for data input. Organizationally other stakeholders included employees who would complete the instrument, training liaison officers who advise employees on training issues, and the organization's Human Resources committee who had the power to action changes identified by the research.

The project initially lacked an explicit strategy for managing the research-stakeholder interface and for developing a sense of ownership among all stakeholder groups. As a result, not all stakeholders received full and timely information about the research project and its progress which ultimately caused some resistance from stakeholders. For example, some of the trainers felt the project was an unnecessary addition to the HRD function's workload, some work areas outside of HRD showed little interest in the research and the findings, and there were doubts about whether the project would be funded beyond the initial research period. These could have been lessened had the affected stakeholders felt a greater sense of ownership and been strategically involved from the outset.

One method that should have been implemented much earlier in the process was to have enlisted several members of these various groups to act as champions and active participators. Although they were not all identified during the project, reflection has led us to believe that it would have been immensely useful to enlist a champion at the Board level to raise awareness of the research process and findings, a champion in the organization's HR committee to foster the implementation of the findings, champions in each of the main work areas to encourage employee participation, and champions in the form of key trainers to encourage participation of training participants.

Employees. In this organization, employees were viewed as a key stakeholder group as they would, after all, be invited to spend twenty minutes completing an instrument when attending a training course. Three methods were used to increase their sense of ownership: (1) the significance of the research was described to employees in a covering letter included with the instrument; (2) trainers gave a short verbal explanation of the research before handing out the instrument; and (3) a short article about the research was published in the monthly employee magazine. All three methods were delivered in commonsense and practical language used by employees rather than the language of research and academia. The hope was that the response rate would be bolstered by employees understanding of the reasoning behind the research and how the results would be used to benefit them and the organization.

Even after this effort, the response rate was only 55 per cent. Informal surveys of non-respondents identified several reasons. Most notable was that employees did not perceive much benefit for investing the twenty minutes necessary to complete the instrument. Also, some respondents only completed part of the instrument because of what they viewed as "the repetitious nature" of the items. Others reported that they could not see the link between the items and the improvement of learning transfer.

Language barriers. Language issues emerged in two distinct places during the project. First, items on the generic instrument had been written for use in a cross-section of organizations, but the generic language tended not to match that used commonly within this organization. Before administering the instrument, the researchers undertook an analysis of the questionnaire and changed references to better fit with the organization while also ensuring the validity of the instrument. Even with these types of edits, there were items and words that were difficult for some participants to understand.

Another place that a language issue arose was when delivering results to key stakeholder groups. Wording of factor descriptions was considered by many in the organization to be "academic" rather than "plain English". This created a barrier to understanding the results. Here again, to reduce these effects, the researchers translated the results into the language of the organization, and most documents containing summaries of the research results contained such translations. In both of these instances, the researchers had not anticipated such difficulty with the language and had deemed the documents as relatively consumable. It was a challenge for both the academic and the practioner to have the organization continuously ask for more practical language and to try to fulfill these requests while also being clear and accurate and maintaining scholarly integrity.

Understanding research. This project drove home the importance of viewing the research process as educative within the host organization. Stakeholders in the organization required education on the research process and, most importantly, on accurately interpreting the results. The desire for practical and actionable results led to particular difficulty in three areas. First, was the tendency to overgeneralize given the sample size and strategy that had been implemented. Towards the end of the research, for instance, an interest emerged in comparing results between various courses, however the sample size for many individual courses was simply too small to produce reliable results at such a detailed level. It was also difficult to continuously remind stakeholders of the sample size in comparison with the population and to focus them on using the results effectively.

A second area that demanded extensive education was around the distinction between items and factors. Stakeholders tended to want to interpret results at the item-level rather than the factor-level, which violates the statistical intent of factors and can lead to ineffective action within the organization.

Finally, there was a need to educate stakeholders about the value of research and to help them gain patience for the process. In an organization experiencing much change, there was little patience, for instance, for what the researchers considered to be a thorough reporting of results. When stakeholders were provided with what the researchers considered to be succinct and thorough 5-10 page summaries of the results (derived from much longer reports), stakeholders reacted negatively and requested one-page summaries that were more like other business reports that circulate in the organization. Here again the researchers took steps to make the summaries shorter and more consumable, while also educating stakeholders to help them see the value of a longer description and its accompanying valuable detail.

Designing Research for Practice

Design of the research project is a critical component of its success. When researching in a practice-setting it is important that special considerations be factored into the design. Four critical strategic issues in this vein were identified through this project: (1) the importance of linking the research with existing strategies, (2) the need to support the organization in designing implementation strategies, and (3) the need for a systematic strategy for disseminating research findings.

Links to existing strategies. The partnership research experience highlighted the benefits of building the research into existing strategies and systems. The LTSI was viewed in the organization as a tangential research project. Consequently it operated independently of existing systems, although its results were interpreted in light of outputs from existing systems and its findings were used to adapt existing systems.

This perceived independence negatively influenced stakeholders' perceptions. For example, some key stakeholder groups only began showing an interest in the research after being presented with the first results which illustrated the potential of using the LTSI. This then created interest at a senior management level, and resulted in additional funding for an expansion of the LTSI program. One way of linking it into existing strategies would have been to position the research from the outset as helping to explain the differences between the organization's existing evaluation results at the learning and behavioral levels, which was an organizational problem that was already gaining some critical attention. This was not done and the momentum that this could have contributed could simply not be recovered.

Finally, the LTSI instrument was not presented to course participants and other organizational parties as a part of the existing evaluation system already in place at the organization. It was marketed as a research project and consequently viewed as separate from the evaluation systems already in place. This was a particular challenge because part of the reason that the LTSI was set-up to participants this way was due to procedures around informed consent and wanting to ensure that LTSI participation remained voluntary. If it had been able to be done differently, it may have been easier to work it more seamlessly into existing systems.

Implementation of research findings. The current project also emphasized the need for organizations to have a timetable and systematic strategy for implementing research findings. In this project, the results were made available to the HRD function in November 1998, however actions to address identified problem areas were only beginning to be planned in Spring 1999. Barriers to earlier implementation included the lack of a supporting champion in key committees within the organization and a view within stakeholder groups that the research results were of long-term importance rather than requiring immediate attention. Not having a solid plan to act on research results only reinforced stakeholder perception that research was an "extra" thing to do.

Another barrier that was uncovered during the time that researchers delivered results to the organization was a perception that the research, and thus addressing the findings of the research, were the responsibility of the HRD function rather than of key people/functions in the organization. Stakeholders perceived HRD ownership for a combination of several reasons including: poor marketing by HRD of the benefits of the research to the organization, HRD initiation of the research without more intense subsequent development and involvement of stakeholders, and HRD sole-funding of the research. To a lesser extent, the perceptions of ownership by some managers reflected a deeper assumption that employee training and development are the responsibility of HRD (rather than of those managers).

Dissemination. The research experience also highlighted the importance of the organization needing a systematic strategy for disseminating research results. Different stakeholder groups have varied needs for detail, timing, and format. In this project, it became clear that one format could not satisfy every stakeholder group—some formats provided too little information and others too much information. Different dissemination methods were therefore adopted. These included presentations to managers, materials for training courses, white papers for HR committees, and Powerpoint presentations for trainers. Although this approach increased stakeholder access to research information, the design and dissemination of the various formats was labor-intensive and time-consuming, especially for the internal researcher. The critical strategic disadvantage however, was that the full details of the research findings were primarily made available only within HRD (although were available on request to others). The main "experts" on the research findings were HRD employees, thus supporting the perception that this research was HRD-owned rather than owned by managers and employees.

Marketing. The marketing of the research process has been a recurring theme throughout this paper, and merits recognition as a powerful lesson learned. Marketing is absolutely critical to the success of a research project inside an organization. Along with learning to conceive of the research process as educative, the researchers also learned how important it is to effectively market the project. It became clear that these researchers had much to learn about getting the message out there in an effective, engaging way. Some of the things that were done to address this included using a variety of internal mechanisms (e.g employee magazine), adapting formats and level of detail presented to various groups, and trying to keep the research project visible.

Partnering for Success

Reflecting on the two years of research collaboration, a few main issues emerged as important in influencing the quality and effectiveness of the partnership.

Mutual roles and goals. The two partnering researchers were aware and explicit from the outset that the research was seeking to address two sets of objectives. The first set came from the organization and included:

- that outputs be sufficiently robust for practical application;
- that the project be kept within financial resource limits;
- not placing an undue burden on HRD trainers and administrators;
- not requiring course participants to spend too long completing the instrument;
- working within organization timeframes;
- moving the research through its various stages only when necessary financial support was secured.

The second set of objectives came from the desire to contribute to the validation of the LTSI instrument. This required academic rigor on data collection methods, sufficient sample size, using the instrument as originally designed rather than too adapted for the organization, discipline in administration of the instrument, and data management.

In this project the partners were fortunate that, for the most part, the academic's goals and those of the practioner were quite compatible. As Jacobs (1999) advises, it was important to define and discuss these at the beginning of the partnership and ensure that the goals of each researcher are not mutually exclusive. This was a relatively easy task in this project because the academic's goals were rather minimal in that the research activity was simply the administration of the instrument. Beyond that, much was negotiable to easily accommodate the organization. This flexibility also allowed the researchers to pursue the secondary and tertiary research questions depending on various levels of organizational commitment.

Another thing that emerged as a powerful theme during the analysis of this research partnership was how the academic and the practioner involved in this project both positioned themselves as *researchers*. A review of the literature has shown that it is not uncommon in case studies describing research/practice partnership to clearly differentiate between the "researcher" and the "practioner". This was not done during this project, and it fundamentally shaped the project and the partnership. Rather, each partner involved here was viewed as an HRD professional who offered a specific set of competencies, expertise, and resources and who's primary goal was to research and then contribute new knowledge to the field of HRD. The practitioner of the team is an active and developing scholar with a clear commitment to research. The academic of the team was, of course, highly motivated to research, while also striving to be an excellent practioner. So, when necessary, each of the partners worked hard to put on the "researcher" hat or the "practioner" hat. These roles and their responsibilities were shared as much as possible rather than delineating specific things to a specific role because one person happened to work in academia and the other in an organization. Due to this, mutual goals included wanting to ensure robust and actionable findings for the organization and, for instance, the goal of publishing article(s) together related to this project.

Viewing the roles as shared in this way also emphasized the importance of each partner educating the other throughout the process. From the academic's perspective, that included providing key (but certainly not *all*) information on the research process, research design detail (such as sample sizes), the interpretation of results (for example, interpreting item-level and factor-level results), and on the publication of results. From the practitioner's perspective, that included providing important (but once again not *all*) knowledge about the organization, on the stakeholder groups, advice on issues of timing and how much to "push", and on how best to communicate aspects of the research project in the organization. All of this was negotiated with both partners holding both sets of goals as equally important and by seeing each role as central to achieving those goals.

Building and sustaining the partnership. The experience highlighted the importance of three factors in the building and sustaining of a successful research partnership. First is simply the issue of time. Relationships take time to develop, and time is necessary for the partners to learn about each other's values and beliefs, working styles, objectives, and goals. Such an understanding emerges over a period of working together, and effort is needed to maintain the relationship once built.

Second, frequency of contact was very important to these researchers during this project. Building the partnering relationship required regular contact, both in the planning of the research and during the subsequent stages. Regular contact allowed both researchers to explore each other's experience of the research in greater depth than would be possible with occasional dialogue. In this project, it was noticeable that the momentum was greatest around the time of a planned contact between the two researchers and tended to slacken if the gap between contacts was too great.

Finally, trust is a central tenant of this partnership and the researchers invested the energy to ensure it. In the case of this research, trust was developed through frequent open dialogue about the research process itself. This included making plans, airing any concerns that emerged, and diligently working to clear up any confusions.

Working "virtual". This partnership research was completed across a four thousand mile divide between the academic in the US and the practitioner in London. This introduced a few special challenges. For instance, the project was rarely discussed face-to-face, so we committed to regular telephone calls (arranged around the six hour time difference between MN and the UK). Much of the communication between the researchers was via e-mail, which led to delays in responses and a need to anticipate activities/events.

Another big challenge was that the researcher was unable to visit the organization or meet any of the stakeholder. She thus had to rely on the practitioner researcher for all contextual information and, from the organization's perspective, key stakeholders never met the academic researcher, which meant their relationship with the research was exclusively with the internal partner. The latter consequence could have influenced stakeholder perceptions of the research. None of these problems were sufficiently large to cause major problems, but all added (in one way or another) to the challenges of partnership research.

Implications

Merriam (1986) once stated that "research and practice…can each be enriched through closer contact with each other". Closer contact, though, brings with it inherent challenges and these must be explored. This reflective piece from two researchers is not any kind of model for effective partnerships—but it does document some of the lessons learned in the course of administering and acting on results of the LTSI at this large public organization. These implications for other researchers to consider as they design and implement their research partnership are offered in Figure 1.

Figure 1. Key Lessons for a Successful HRD Research Partnership.

INVOLVEMENT AND UNDERSTANDING IN THE ORGANIZATION

- Identify and enlist the support of main stakeholder groups. Pay particular attention to budget holders, stakeholders within HRD, key decision makers outside of HRD, and employees who will be invited to participate.
- Create a strategy for developing champions for the research project within HRD, in key committees, and within work areas. Involve them as much as possible in the design and implementation of the process.
- Reach out to employees who participate in the research and help them to see the value of their participation.
- Use the language of employees - avoid the language of research and academia where that creates a barrier.
- View research in applied settings as an educative one. Be ready to educate, educate, educate! Stakeholders and champions need education about many aspects of the process (objectives, timeline, resources) and must be helped to understand the process and its value.
- Educate key stakeholders and champions about research design in advance of research implementation so that they understand the implications of design issues. (e.g. sample size, generalizability, etc…)

DESIGNING RESEARCH FOR PRACTICE

- Where possible, link the research project with existing organization strategies and systems.
- Develop an implementation strategy with the involvement of key champions to increase support for early consideration of findings.
- Be clear from the outset who/what function must be primed to act on the findings of the research project. Involve them in the research design and implementation.
- Begin planning to take action on the research findings during initial design of the research project.
- Develop a systematic dissemination strategy that provides each stakeholder group with the right level of detail in a language they will understand, and at the right time.
- Develop a comprehensive marketing strategy based on the needs of various stakeholder groups and utilizing different delivery formats and varied levels of detail (based on those needs).
  - Access internal communication avenues to market the research (e.g. employee magazines).
  - Keep the research visible throughout the research process, particularly during data collection and analysis stages, when stakeholder groups may otherwise see less in terms of progress.
  - Market the research in the language of stakeholder groups, avoiding academic language.
  - Emphasize the practical benefits of the research to stakeholder groups.

PARTNERSHIP

- Explicitly identify each parties objectives at the outset and design the research to best address all mutually-agreed upon goals. Within those objectives, include the organization's financial and non-financial resource constraints, organizational timeframes, and the desired utility of results beyond the immediate organization.
- View both (all) partners as researchers, rather than "researcher" and "practioner". Share the researcher role and responsibilities.
- Work to build and sustain an effective trusting relationship over a long period of time, based on frequent contact and an awareness of each others' motivations and goals for the research and the relationship.
- Take advantage of the development opportunities of working with each others, accepting that each brings different knowledge, expertise, and experiences to the partnership.
- Anticipate and address challenges presented by partnering 'long-distance (such as logistical problems like time differences, lack of face-to-face contact between partners, and lack of contact between the academic partner and key stakeholders.

Limitations and Conclusion

The findings reported here are not to be overgeneralized. Once again, the purpose of this paper was simply to share practice-driven knowledge that these two researchers have gained and applied during the course of this evolving research partnership. These findings are specific to this situation and these researchers, and the lessons that have been extracted are necessarily limited by the state of development of each of these researchers.

However, it is hoped that, like other pieces of this nature, the results will help other HRD professionals who are working together as research partners "to engage in reflective observation and dialogue about their own efforts" (Kehrhahn & Verrilli, 1999) and encourage them to share their learnings with others so that we may all continue to develop additional specific expertise around research partnerships.

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Inquiring into the Dilemmas of Implementing Action Learning – Innovative Session

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This paper provides a basis for an innovative session inquiring into selected dilemmas of implementing action learning: the disorientation learning frequently experience on entering action learning programs; trade-offs among program design options; and dealing with organizational resistance. The session will be highly participative.

Key Words: Action Learning, Design, Implementation

This paper provides an introduction to the an innovative session, the purpose of which is to foster dialogue within the context of theoretical models derived from empirical research between participants and five scholars in a panel who espouse different models for conceptualizing Action Learning. The research on which this panel is based is not, in and of itself, new. However, the session will make a contribution to scholarly dialogue and to advancing the group's understanding of theory-practice issues around the research. Both the panel and attending participants will be invited to build on the theory base by identifying themes from their own practice that confirm, contradict, or augment the insights that these scholars have gained through their own research and practice. We will use practices of skillful conversation and dialogue (Senge, Kleiner, Roberts, Ross, & Smith, 1994, Watkins & Marsick, 1993) that are increasingly used in organizations to help managers make sense of their experience in order to foster a similar mode of sense making in this session. The paper below generally follows the format of the session itself, the template for which is found at the conclusion.

Problem and Research Base

References to Action Learning are increasingly being made in discussions among HRD practitioners and in the HRD and management literatures. Marsick and O'Neil (1999) describe differences in Action Learning practice, and compare Action Learning to Action Research, Participatory Action Research, Action Science, Action Inquiry, and Collaborative Inquiry. Marquardt (1999) links Action Learning to organizational learning, as have Marsick and Watkins (1999). Dotlich and Noel (1998) have discussed Action Learning as a method of organizational transformation, and Mumford (1995) discusses Action Learning as a method of management development. Dilworth and Willis (1999) have described Action Learning as an approach for personal development and growth. As more organizations consider Action Learning as a form of management and organization development they encounter several possible obstacles and problems that must be resolved if they are going to experience the potential benefits of this approach. This is not surprising. Most powerful interventions in organizations run counter to the prevailing culture that they are designed to change. However, it is important to share experiences and develop theoretical frameworks to help HRD and organization development practitioners prepare for and overcome these obstacles.

Increasingly, research is being conducted to describe various Action Learning experiences. The research is primarily qualitative in nature, and has resulted in a number of detailed descriptions of the way in which programs

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are conducted (Dennis, Cederholm, & Yorks, 1996; Mumford, 1994; O'Neil & Dilworth, 1999), the experiences people have in these programs (Marsick, 1990; O'Neil, Marsick, Yorks, Nilson, & Kolodny, 1997; Weinstein, 1995), or the practice of people who design these programs (Pedler, 1996; Marquardt, 1999; O'Neil, 1999b). This research base informs the present discussion.

Action Learning Defined (Lyle Yorks, Presenter and Session Moderator)

The term *action learning* has come to mean many different things to people. There are, however, certain common features to various forms of Action Learning that distinguish it from other forms of experience-based learning. The foundation of Action Learning is the notion of working in small groups in order to take action on meaningful problems while seeking to learn from having taken this action. Some authors and researchers explicitly add the notion of learning through a cyclical process of taking action, consciously reflecting on that action, drawing conclusions from this reflection, and taking revised, subsequent actions. In addition, some models of Action Learning advocate the use of learning coaches to help guide this process of action and reflection while refraining from giving specific advice. This concept of learning from real work with the intention of learning distinguishes Action Learning from other forms of active, experiential learning, such as case studies, simulations, or adventure courses that elicit principles that are to be subsequently applied in the organization. For purposes of this paper action learning is defined as "*an approach to working with and developing people that use work on an actual project or problem as the way to learn. Participants work in small groups to take action to solve their problem and learn how to learn from that action. Often a learning coach work with the group in order to help the members learn how to balance their work with the learning from that work*" (Yorks, O'Neil, & Marsick, 1999b, p. 3).

Variations of Practice

This definition is broad enough to encompass the major variations of Action Learning being practiced today. A comprehensive analysis of various Action Learning programs by O'Neil (1999) led to a typology of four distinct approaches to Action Learning; 1) the tacit school, 2) the scientific school, 3) the experiential school, and 4) the critical reflection school. The tacit school is distinguished by its lack of specific intentionality toward learning. This school assumes that significant learning will take place so long as carefully chosen participants are put together, some team building is done, and information is provided by experts in support of project. Although the program itself is planned, learning is not planned. The learning that does occur is what Marsick and Watkins (1990) have categorized as "incidential" (see for example, Downham, Noel, & Pendergast, 1992; Noel & Charan (1998) for a description of programs that fit this description. The scientific school is rooted firmly in the seminal work of Reg Revans (1970) and the approach is highly rational involving application of the scientific model of problem solving to workplace and social problems. Revans (1978) emphasizes the importance of learning from peers, whom he calles "comrades in adversity," each wrestling with a difficult, seemingly intractable problem. His emphasis is on solving the problem by forming hypotheses and careful experimentation through action to develop "questioning insight." The experience of this kind of program is captured by Preston (1977), an executive who participated in a program based on Revan's approach at General Electric Company (GEC). Proponents of the experiential school base their thinking on Kolb's (1984) experiential learning cycle. Practitioners of this tradition place stronger emphasis than do those in the scientific school on the role of intentional, explicit reflection through the process with a learning coach actively designing practices to this end. Mumford (1993) provides a good introduction to this approach. Practitioners in the critical reflection school share with the experiential school the emphasis on the learning cycle involving explicit reflection. They differ however, in emphasizing a deeper level of reflection that focuses on the underlying premises in the thinking of the participants. This model explicitly challenges participants to examine deep seated assumptions they hold about the organization culture and their own practices as managers. The program described by Dennis, Cederholm, and Yorks (1996) is an example of this type of program.

The typology described above captures the variations of Action Learning interventions that can be seen in contemporary practice. Yorks, O'Neil, and Marsick (1999b) have advanced a pyramid model of these types of Action Learning approaches, with the tacit approach at the base of the pyramid, the scientific school the next level, the experiential school the third level, and the critical reflection school the fourth level. They use the imagery of a pyramid to suggest a cumulative ordering of schools in terms of the kinds of learning that are most likely to be produced by each and the outcomes desired by the program. As one goes from the bottom of the pyramid to the top, the learning outcomes that can be achieved become more complex, critical, and contextual. Also, as the intervention becomes targeted toward outcomes that are more complex, critical, and contextual, more noise is produced in the system and thus potentially more resistance to the process. By noise we mean comments challenging the program as participants are asked to reflect on long-held assumptions, mental models, and issues that have been previously treated as undiscussable. As participants come to revise their assumptions around these issues, and consequently their actions, the larger organizational system is also more likely to push back on the process. Practitioners seeking to implement Action Learning in their organizations can use the pyramid model to make decisions about which model is most appropriate for their organization and the outcomes they wish to achieve (Yorks, Marsick, & O'Neil, 1999).

Three Common Dilemmas

When implementing Action Learning practitioners are typically confronted by several dilemmas or issues that must be effectively addressed if they are to have a successful experience. Some of these are common to virtually all Action Learning initiatives, others more peculiar to some of the variations than others. This session addresses three such dilemmas that are relevant to all the variations, although the form and intensity can vary based on both the organizational context and the type of program being implemented. The three are: 1) "weathering" the disorientation learners often feel when first exposed to Action Learning, 2) "trade-offs" in project design, and 3) Resistance to Action Learning.

Weathering the Disorientation Learners Often feel When First Exposed to Action Learning (Lex Dilworth, Presenter)

Most individuals are the products of learning experiences where the learning objectives were set for them, a definitive course outline was provided at the start, and the delivery of learning was by the didactic formal classroom method. Therefore, they have come to anticipate clear structures and boundaries when they engage in new learning opportunities. It can also be comfortable to be passive, looking in on the experience rather than being a part of it. Learning styles can also be in the direction of strong need for structure, a need often reinforced by past experiences in a classroom. As the program design itself challenges the assumptions of participants through reflection and critical reflection, the disorientation potentially becomes more intense.

The action learning experience flows from a different place. It starts with a process, and this in a sense provides some semblance of structure. However, the fundamental focus is learner centered and oriented on adult learning principles. As opposed to the pedagogy that characterizes the K-12 experience (Not to mention some undergraduate programs), participants are asked to think for themselves and have a core stake in shaping learning objectives and strategies. Critical thinking skills are emphasized, as opposed to being handed "predigested" analyses and conclusions that may not fit with present day realities.

What has just been described can be extremely disorienting. It can represent a 180-degree turn from the kind of learning format the learners have come to expect.

Patient, and Artful, Coaching

The best prescription for dealing with this "disorienting dilemma" from the learners perspective--wanting to contribute and be seen as intellectually able to adapt, but with gnawing feelings of self-doubt and discomfiture-- is patience, clear mapping of the general process up front, opportunity to practice true dialogue and questioning inquiry, some coaching in group dynamics skills, and creation of a nurturing and supportive environment within which learning can occur.

Two researched examples demonstrate the value of this supportive coaching. The first involved thirty-one participants from the United States, Australia, and Canada who met in England for an action learning experience (Dilworth & Willis, 1999). All the participants were high level executives, consultants, or entrepreneurs. Early in the process the experience was carefully mapped out and they were given selected writings on action learning from different perspectives to help prepare them for the experience ahead. This helped prepare them for the unfamiliar environment in which they found themselves. In this case, being so far away from their home setting, with office politics three thousand or more miles away, they also found they could be themselves and ask themselves and others fresh question. Initially, this process of questioning was facilitated by the kinds of questions posed by the coaches.

A more complete example of the process of how this dilemma resolves itself through the coaching process describe above involved research into six university based action learning programs. Of the six universities researched that employ action learning, five of them use a facilitator presence up front, and then have the facilitator fade back to a "By invitation only" status in working with the action learning sets. It is a case of "jump starting" the process and then promoting learner independence (A crucible of Adult Learning and Andragogy), rather than encouraging dependency.

The five universities using this strategy are Virginia Commonwealth University, George Washington University, University of Salford (England), University of Ballarat (Australia) and Georgia State University. The University of Texas at Austin has a very robust program that, on the other hand, features a facilitator presence throughout. There are many variations on basic themes that can be effective in action learning.

Commonly, by the third or fourth meeting the action learning set has weathered the disorientation and become comfortable mapping its own routes to learning. Learners can experience what one might call a "freedom to learn", and come to enjoy determination of their own agenda, within deadlines of time and project parameters. Employees are expected to think for themselves, solve problems and isolate the kinds of knowledge required for organizational success, factors that can be related to knowledge management and development of learning organizations.

Observations and Reflective Questions (Victoria Marsick)

Although the program culture may be less disorienting when people voluntarily participate, experience shows that the action learning experience is no less disorienting if the program as been around for a while and participants have at least heard "war stories" of what the experience is like (Dennis, Cederholm, & Yorks, 1996). Action learning programs often fly in the face of both personal capability and organizational norms. The tacit school is less disorienting because coaches are not utilized or their help is sought primarily to manage group dynamics (O'Neil, 1999b). Hence, peers may not critically challenge personal beliefs and organizational norms. Questions can be raised around the ethics of helping people to become more self-directed in their learning if the organization is not ready to change its systems and rewards to support them. To what extent is resistance to self-direction tied to command-and-control bureaucracies? Will this resistance disappear given the emergence of a Generation X workforce and/or e-commerce?

"Trade-offs" Among Action Learning Designs (Judy O'Neil, Presenter)

As noted above, one of the problems of describing action learning is the variation in types of programs. As a result, discussions and explanations of action learning programs can appear to be describing different, and sometimes contradictory, events. As practitioners read the literature, they see differences in underlying theories and designs—including choice of project, length of the program, choices of participants and content of the program, to name a few. It becomes difficult to sort out the information needed to decide the kind of program that should be designed and implemented. As with any major intervention, one of the first steps that needs to be taken is to determine the needs of the organization and/or the needs of individuals who might be in the program (McNamara, 1996; Weinstein, 1995; Yorks, Marsick & O'Neil, 1999). Through a needs assessment, a practitioner can determine that action learning is an appropriate choice, as well as identify objectives for the program and development areas for participants. He or she can then determine what 'kind' of action learning would best meet the needs of the organization and participants.

Design Elements

There are a number of elements of design that can differ dependent on the objectives of the program, the "school" chosen, and the capacity of the organization to invest time and deal with change. Three of the most important choices involve: 1) individual or team projects, 2) the length of the program, and 3) the choice of participants — each member of the action learning group/team has their own project or the entire team works on one project. In either case, many projects have an interested outside sponsor.

Trade-offs between working on individual projects vs. team projects. When participants work on a team project there is usually the intent of working on the project for the development of organizational goals

(Mumford, 1989). Team participants are often not involved in implementation, so while personal development can also be addressed in the design, the focus is on the organization (McGill & Beaty, 1995). When participants have their own individual projects, by contrast, there is a greater intent of learning from the implementation for personal development. With team project work, it can become more difficult to hold the program and team at a high level of learning. The team is in danger of becoming a good and useful task force (Mumford, 1989). When a participant is entirely responsible and at risk in the implementation of solutions to his/her own project/problem, there can be greater focus on the individual through such work as challenging personal assumptions versus organizational norms (Lawrence, 1991).

In either case, good action learning projects generally meet the same criteria. The projects are:

- complex, overarching, and are often cross-functional (O'Neil & Marsick, 1994)
- problems, opportunities, or difficulties about which "different reasonable, experienced and honest men would wish to pursue different courses of action ..." (Revans, 1978, p. 11); there is no single solution (Weinstein, 1995)
- 'real and alive', meaningful to participants, and about which participants have the motivation to act (McGill & Beaty, 1995; O'Neil & Marsick, 1994; Weinstein, 1995)
- familiar or unfamiliar problems that exist in familiar or unfamiliar settings (McNulty, 1979; Revans, 1978; Weinstein, 1995).

Determining the length of the program. The length of programs varies widely (Casey & Pearce, 1977; McGill & Beatty, 1995; O'Neil, Arnell & Turner; Noel & Charan, 1992) based on the objectives of the program and the organization or individual's capacity to invest time. There are some parameters, however. In his dissertation work, McNamara (1996)—in a formative evaluation of a team-managed, multi-techniques management development program that included action learning—found that if teams met less frequently than once a month, the participants tended to lose momentum and trust. O'Neil (1999a) found that in an evaluation of a program at a public utility teams needed to be able to meet for at least two consecutive days each time they met in order to be able to address both team projects and personal development.

Choosing participants. Programs discussed in the literature show a variety of participants (Cunningham, 1997; Dennis, Cederholm & Yorks, 1996; McNamara, 1996; Yorks, O'Neil, & Marsick, 1999a). As with the earlier discussed design elements, participants are usually chosen based on the objectives and intent of the program (Yorks, O'Neil & Marsick, 1999b). Participants range from senior level executives to entry-level employees in organizations; to students in academic programs; to social advocates. Once the participants are selected it is important to form groups based on the greatest diversity—including such elements as background, age, gender and nationality. Although not always possible, again depending on the objectives of the program, having volunteer participants in the program is considered to be a good idea (Weinstein, 1995; O'Neil & Dilworth, 1999). If the objectives require participation, good preparation of participants, and anticipation of uncertainty and resistance, are important elements of design (O'Neil, 1999a; O'Neil & Dilworth, 1999).

Observations and Reflective Questions (Victoria Marsick)

The trade-off between using individual or team projects may be the most pivotal design decision. Individuals tend to have more motivation when they work their own issues (O'Neil & Dilworth, 1999). When working individual projects, participants may be more open to interventions from a learning coach because they have "hit the wall" and are frustrated with their own failed efforts. However, programs centered on individual projects are also less likely to provide leverage for organizational change because challenges to the system are not sanctioned by project sponsors (O'Neil & Dilworth, 1999). Questions can be raised around the way in which needs assessments are conducted, given the implications of design for individual vs. organizational change. For example, to what extents are needs assessments oriented to knowledge and skill gaps of individuals vs. systems change needs? To what extent are designers driven by a realistic appraisal of the readiness of the system for culture change?

Addressing Resistance to Action Learning in Various Settings (Michael Marquardt Presenter)

There are a variety of ways in which organizations and individuals present obstacles and/or offer resistance to the introduction and implementation of action learning programs in organizations. Below are five ways in which resistance manifests itself along with ways in which they can be addressed. As the amount of "noise" increases as result of the type of design selected, the level of initial resistance also increases.

Unwillingness of the organization to empower the action learning teams to identify solutions and take action on problems submitted to them. Many managers are unable or unwilling to delegate their power and decision-making to a group that might come up with actions with which they are not fully comfortable. This is a serious problem since it is very difficult to sustain action learning programs when the teams come to recognize that they are merely offering suggestions that are not likely to be implemented by the managers sponsoring the AL program. The potential for this form of resistance is especially strong in the critical reflection schools, as solutions are more likely to challenge the way individuals and/or the organization has been operating. Two ways of dealing with this problem are to 1) engage senior managers in case discussions that highlight the kinds of power they are likely to have to delegate, and 2) select a problem that allows for more incremental learning on their part to adjust to empowering their people. They are not mutually exclusive and both highlight the systemic nature of Action Learning in organizations.

Engaging senior managers through relating case studies from organizations that have successfully used action learning over a number of years is one way of addressing this problem. This can be done in a way that provides for a vicarious experience of what to expect through reasoning through analogy (Neustadt & May, 1986). Marquardt (1999) provides examples of such cases. In selecting cases it is important to provide those that correspond to the type of program being implemented, fit the context of the organization in question, and avoid glossing over the difficulties that might be encountered (Yorks & Whitsett, 1985).

One of the most effective ways of dealing with this problem is to select a problem that is important, but has primarily an internal impact and that can have sufficient time for interim actions for testing. This allows senior managers to learn their way into empowering teams and coming to trust the recommendations and learning of the managers on the teams. This approach also recognizes the systemic nature of the learning that needs to occur--learning among the participants on the teams and learning on the part of managers overseeing the projects.

Inability of the project client/presenter to trust the members of the action learning team to develop solutions for his/her problem. The power of action learning is dependent on the client/presenter truly trusting and counting on the group to assist him/her. If the presenter holds back information and/or lacks commitment to take action, the members will soon lose their interest and energy to help. One way of overcoming such resistance on the part of the client is to allow him or her a "pass" at this session. Let him or her observe how the process works by beginning with another client/presenter in the organization. As he or she sees the successes of fellow colleagues, the resistance might later turn into a keen desire to also take advantage of the power of action learning. Often the earlier resisters turn into the strongest champions once they have had a change to carefully build their level of trust. This is an issue for all four schools of action learning.

Resistance to allowing "outsiders" to be part of the set. Diversity of team members is essential for fresh questions and a wide variety of perspectives. The organization may feel that it takes too much valuable time to help an outsider "catch up" with people already familiar with the problem. This resistance can best be met by providing successful real cases in which outsiders have helped organizations/groups solve their most difficult problems. One such case is the Pizza Man (Marquardt, 1999).

Not allowing time for learning or for a learning coach. Group members may wish to devote all their time on working on the problem, or wish to quickly leave after action steps have been determined. In fact research suggests that there is an inherent tension between time spent working on the project and taking time for reflection and learning (O'Neil, Marsick, Yorks, Nilson, & Kolodny, 1997). Of course, not allowing for the learning coach to assist the group in "capturing" the learning would result in losing what is most valuable in the action learning process. This resistance is usually overcome as soon as the learning coach has successfully helped the individual members and the group recognize and reflect on their learning and they see the tremendous benefit of the time spent in "mining the learning." This requires that the learning coach contract clearly with the group around the time he or she will take for structuring reflection and have the strength of personality to hold to that contract. This issue is an important consideration for programs similar to the experiential and critical reflection schools because these programs build in coaching throughout the program.

Some organizations/individuals may be hesitant to share "inside" or "confidential" information with people within and/or outside the organization. This concern can be addressed by establishing a norm that should be part of any action learning group; i.e., any information shared within an action learning session is considered confidential, and may be shared outside the group only with the approval of all members. Without confidence in the confidentiality of the group, clients and members may not be willing to share crucial information that they possess.

One solution to this problem is to explicitly couch the action learning effort in the same framework as a consulting relationship. In fact, this is one of the potential selling points—the opportunity of getting a group very smart, capable people to examine one's problem. Group members from inside the organization are often high potential members, who are highly motivated by exposure to information not ordinarily available to them. They are also very cognizant of the need to demonstrate their trustworthiness. In action learning designs where people come from outside the organization confidentially agreements can be signed, similar to those commonly signed by external consultants. This, of course, is only necessary where the host organization is uncomfortable having outsiders working in their organization. A good example of an action learning program using people from outside the organization has been presented by Dilworth and Willis (1999).

Observations and Reflective Questions (Victoria Marsick)

Action Learning is an organizational intervention even if it is couched primarily as individual development (Yorks, O'Neil, & Marsick, 1999a). As programs move from the tacit to critical reflection schools, the focus is increasingly on the ability of both learning coaches and participants to ask penetrating questions that challenge the system and organization environment (Yorks, O'Neil, & Marsick, 1999b). Individuals who gain these skills are less satisfied with the status quo. Team projects surface conflicts that are organizational as well as personal. Given that action learning programs often enter the organization through human resource departments, questions can be raised around access to top management and their willingness to engage the action learning process in a meaningful way. To what extent are consultants advising on the design of action learning programs working with the entire system. To what extent are learning coaches prepared for, and sensitive to, the risks of managing groups and systems in transition?

Continuing the Conversation and Building New Insight (Lyle Yorks, Moderator)

The narratives above, contributed by members of the panel, summarize a significant part of the knowledge base from research and experience in implementing action learning. The purpose of this session is to build on these insights through dialogue and skillfull conversation among the panelists and others participating in the session. New observations will be captured and distributed. The process of skillfull conversation involves a process of first pursuing questions of clarification to insure understanding and second facilitating a balance of advocacy and inquiry (Watkins & Marsick, 1993) in order to facilitate useful dialogue that allows specific issues to emerge. To insure a successful process the moderator will strictly enforce the guidelines presented at the session and adhere to the timeline: Introduction to the session, guidelines and definitions (Moderator) 5 Mins.

First issue framing: "Weathering" the disorientation learners often feel when first exposed to Action Learning	5 Mins.
Panel response	9 Mins.
General audience conversation	10 Mins.
Second issue framing: "trade-offs" in project design	5 Mins
Panel response	9 Mins.
General audience conversation	10 Mins.
Third issue framing: Addressing resistance to Action Learning in various settings	5 Mins.
Panel response	9 Mins.
General audience conversation	10 Mins.
Closing panel comments: Issues and questions inquiry	10 Mins.

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Human Resource Development in an Industry in Transition: The Case of the Russian Banking Sector

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This study documents issues and problems faced by the Human Resource Development (HRD) system in Russian banking industry, identifies future trends for the development of this system, and provides insights into the evolution of the workforce education and human resource development systems in industries in transition. Recommendations for the transfer of Western HRD practices, and a number of future research directions are formulated. The study was conducted in 1998; it included 70 large and medium-sized banks from 6 regions of Russia, and 45 education and training institutions.

Key Words: Economic Transition, Banking, International Human Resource Development

The development of financial markets and of strong banking institutions is essential for the successful transition to a market economy. A viable market-oriented banking system needs a critical mass of qualified professionals, capable of working in a new, more competitive and volatile environment. In Russia, tens of thousands of new hires and existing banking employees of all levels and specializations need to acquire skills and knowledge, which are substantially different from what was a norm under the old system. This massive education and human resource development task is complicated by the fact that the institutional, legal, and regulatory environment of the banking industry is still evolving, and is characterized by macroeconomic instability, ambiguity about property rights, and inflationary pressures (Goldman, 1998). At the same time, the banking sector itself is in a constant flux. Since Gorbachev's reforms in the late 1980s, Russia has witnessed an explosive growth in the number and assets of private banks: in 1993, just 5 years after the creation of a first commercial bank, there were over 1,700 independent banks in Russia (World Bank, 1993, p. 9). However, most of these banks were relatively small, and a high rate of organization turnover is a testimony to turbulence in the industry (The state of the banking industry, 1997).

Western governments, international organizations, and individual public and private institutions have been providing different forms of training for Russian bankers since the early 1990s, mostly through short courses introducing to a different banking culture (Bruck, 1995; Ward, 1993). These activities were paralleled by the proliferation of attempts to transfer Western training and development practices to Russia and the former Soviet republics. Recent years have brought both accounts of successful implementation of Western training and development interventions in Russia and Eastern Europe (Warner & Campbell, 1994) and other reports, filled with cautions against "unfettered passport" for the Western training practices to the former communist countries (Geroy & Carroll, 1994; Robinson, 1992; Varner & Varner, 1994).

The Western-sponsored programs were by no means the only source of banking training: numerous Russian institutions of higher education and professional development began to offer a variety of training and development opportunities in banking-related areas (Zakharov, 1997; IfBG Online). At the time of this study, the system included: Departments of finance at the universities and colleges (preparing mostly entry-level bank employees with undergraduate degrees); specialized finance and banking schools (for example, The Financial Academy in Moscow, The International Finance and Banking School in Moscow, and the Siberian International School of Banking in Novosibirsk); finance programs of the leading business schools (for example, The Moscow International Business School, MIRBIS); the training and development branch of the Association of Russian Banks; programs for the finance executives at the major executive development centers (The Russian Academy of Management, for example); training and development centers of large banks.

After an initial splurge of interest in banking education and training in Russia, in recent years the number of students graduating from various degree programs and short-term professional development courses in banking has dropped significantly (Porshnev, 1997; Zakharov, 1997). This can be explained by three factors: the initial need for basic training in fundamentals of market-oriented banking has been largely satisfied; tightening of overall financial

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situation in the economy in general and in the banking industry in particular, has lead to the lack of funds available for training and development; finally, many bank executives shared a perception that most providers do not offer practically useful programs, and do not teach skills that could be immediately implemented in the workplace (Zakharov, 1997).

To meet the changing demands of the marketplace, Russian banking-related education, training and development institutions, and Western educators and trainers working in Russia, need to be able to determine current and future needs of their target audience, and tailor their offerings accordingly. Therefore, the first goal of this study was to understand the issues and problems faced by the banking education and training system in Russia, and identify the directions for its future development.

Apart from the above instrumental goal, this study had a broader theoretical objective of understanding the realities of the evolution of workforce education and human resource development systems in industries in transition, and generating recommendations for Western scholars and practitioners attempting to study and influence comparable systems in other settings. To this end, the Russian banking industry provides an especially interesting case study for three reasons: 1) it includes a variety of banking institutions of different sizes and forms of ownership, including those that have existed in the Soviet era, and numerous new private institutions; 2) it has a developed network of education and training institutions, including both state-owned organizations that existed in the Soviet period, and newly created organizations of new types and forms of ownership; 3) the industry is characterized by a high degree of turbulence, which offers additional challenges in conceptualizing and designing new systems of education and training for industry professionals.

Research Questions and Methodology

The study was conducted in January-May 1998. At the preliminary research stage, we have reviewed a wealth of published sources (government statistics, materials published by think tanks, market and financial reports, and articles in business press), to gain a general understanding of the current situation in Russian banking industry and in its human resource education and development institutions, and to collect background information on major Russian banks and training and development organizations. Based on the analysis of these data, we have developed a number of research questions to guide the study. These questions were discussed at a focus group involving twelve bank executives, directors of institutions-providers of education and training services for the banking industry, and academics specializing in HRD issues. The resulting list of research questions looked as follows:

1. How is the HRD function in banks organized and managed?
2. What are the major HR/HRD issues for Russian banks?
3. What are the desired characteristics of successful new hires?
4. What are the types of employee education, training, and development programs for banking industry?
5. What are the perceived future trends in banking education and training?
6. What is the delivery potential of the existing education, training and development institutions, and how to further improve this potential?
7. What are perceived problems and barriers hindering the development of the education, training and development system in Russian banking industry?

Further, the pilot discussions have revealed that there were differences in perceptions between the representatives of the education and training organizations, on the one hand, and the bank executives, on the other; and between the representatives of large and medium-sized banks. This observation prompted us to explore the implications of these perceptual differences, and to collect the data from three groups of respondents: large banks, medium-sized banks, and educational and training institutions.

The primary data collection method was a face-to-face interview. Other methods of collecting expert opinions (mail surveys, phone interviews, Delphi method) were not feasible, given the general unreliability of mail and phone services, and extremely low response rates for mail surveys in Russia (Ardichvili, Cardozo, & Gasparishvili, 1998). Specially trained interviewers from the Center of Sociological Research of the University of Moscow have been interviewing participants in their work places, using a structured interview format, which included both closed-form and open-ended questions. The survey was conducted in six cities: Moscow, St. Petersburg, Ekaterinburg, Voronezh, Saratov, and Stavropol. A total of 70 *banks* participated in this study (35 large and 35 medium-sized banks). Of these, more than 50% (39) were from Moscow. This should not come as a surprise: the concentration of banks and training and development institutions in Moscow is disproportionately high compared to the rest of the country. For example, in 1993, 65% of 20 largest commercial banks of Russia were located in Moscow, which compares to only one such bank located in the next largest city – St. Petersburg (World Bank, 1993, p. 11). The large banks were selected from the list of 100 largest Russian banks maintained by the information center "Rating" (http://www.most.ru/wintext/rate.htm). These banks all have assets in excess of 1 billion rubles. The medium-sized banks were selected from the Association of Russian Banks list of 200 banks with assets of up to 500 million rubles. In large banks, we interviewed vice presidents responsible for human resource issues; in medium-sized banks--presidents or CEOs.

Our initial plan to conduct random sampling of *training and development institutions* proved to be unrealistic: there was no single source of information from which we could draw a random sample. Consequently, we had to create our own list, using the Internet, phone books, reference publications, and industry journals, and contacting all the institutions that, judging by their names, seemed to be related to education and training in the banking industry. A total of 55 organizations were identified and contacted. Of these, 45 participated. Fifty-four percent of these organizations were state-owned, and 45% were private. In all 45 cases we interviewed top executives: directors or presidents.

Data analysis. The analysis involved both quantitative and qualitative methods. Exploratory data analysis (EDA) was used to examine results and report frequency distributions. The use of this simplified approach is justified in an exploratory study (Howell, 1992). T-tests were used to assess differences between groups of respondents. The results of the statistical analysis were enhanced by the content analysis of the interview transcripts, conducted by two researchers independently.

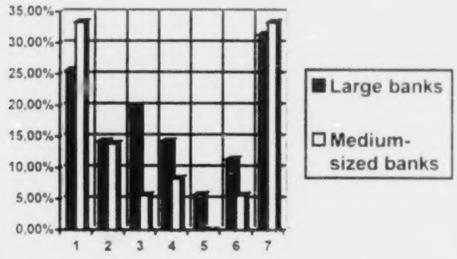
Results

In this section, we present the most important study results. We address the seven research questions, and discuss additional, not anticipated initially findings, generated by the open-ended questions.

How was the HRD function in banks organized and managed? In all banks in this study, HRD was integrated into the HR function, and no distinction existed between HR and HRD. The results showed that training and development activities had a higher priority than organization development (OD) issues: More than 70% of HR departments were engaged in planning of training and development, organizing and managing training, and dealing with the issues of promotion and career development, whereas only 49% of departments dealt with the issues of organizational culture development or organization design (Table 1).

Table 1. Functions performed by HR departments

Function	Percentage of respondents indicating that function was performed by their HR department
Selection and hiring	74.6%
Promotion and career development	83.1%
Organizing and managing training	74.6%
Planning of training and development	71.8%
Performance appraisals	67.6%
Developing the organizational culture	49.3%
Organization design	49.8%

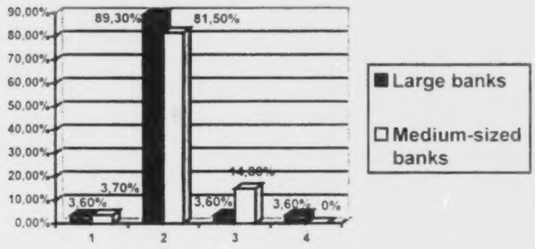


1. Addressing the lack of entry-level specialists
2. Improving quality of current personnel
3. Developing organizational culture
4. Improving the level of current internal training and development efforts
5. Increasing the role of strategic HR/HRD planning
6. Improving work conditions
7. Not sure

Figure 1. What are the banks' major HR/HRD issues?

What were the major HR/HRD issues for Russian banks? The largest issue, as perceived by respondents, was the lack of entry-level specialists of certain professions, and inability of the educational system to meet this demand (Figure 1). Further, only 20% of large banks felt that developing organizational culture was an important issue; medium-sized banks ranked this issue even lower. Finally, only 6% of large banks, and almost none of medium-sized banks considered strategic HR/HRD to be an important issue for them.

Most respondents (97% in both large and medium-sized banks) agreed that students fresh out of college were not ready for the banking industry work (Figure 2). At the same time, 89% of large banks and 81.5% of medium-sized banks believed that 2 or 3 months of on-the-job training were enough to equip the new hires with needed skills. However, there is another important component of new hires' skills and abilities set: psychological readiness to work in this turbulent and high-stress environment. The respondents agreed that virtually none of new college graduates were ready in this respect. There were two ways of addressing the above issue. One approach (that of the majority of the respondents) was to conduct the new hire training and development. In this effort, banks utilized internal groups of industrial and organizational psychologists, and used outside consultants. The focus of this training was on introducing the new hires to bank's organizational culture, and on developing sensitivity to environmental pressures. The rest of respondents (20% of large banks and 25% of medium-sized banks) had a policy of not hiring college graduates, and preferred to attract experienced employees from other organizations. This policy was explained, again, by psychological readiness, and by the banks' inability to train people internally. The HR departments of large banks even had systems of monitoring most promising professionals in the field, and were organizing campaigns of recruiting specialists from smaller banks.



1. The education received by new hires at colleges and universities is satisfactory
2. As a rule, fresh out of college employees need to be trained internally for 2-3 months
3. The new hires' training does not reflect the realities of the workplace, and there is little we can do about it
4. Not sure

Figure 2. What is the level of readiness of specialists hired fresh out of college/university?

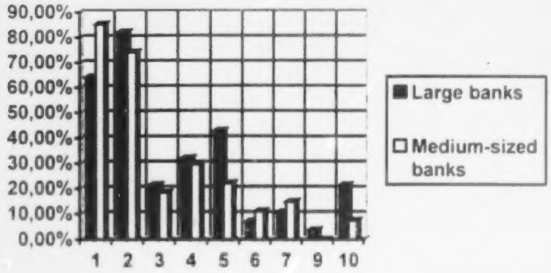
What characteristics of new hires were important? In this area, several similarities and differences between the positions of large and medium-sized banks were found (Figure 3). First, practical work experience was important for both large and medium-sized banks. However, only 62% of large banks considered this to be a first priority, whereas more than 80% of medium-sized banks have put practical experience on top of their list (significant at 0.05).

For large banks, education in theory of banking was the most important factor, followed by practical work experience, and by the knowledge of foreign languages. For medium-sized banks, practical experience was the most important criterion, followed by theory and by strong references. The last finding may be explained by the fact that medium-sized banks did not have systems of assessing the new hires' qualifications and had to rely on strong references instead.

Of special interest to Western HR/HRD practitioners should be our finding that age and sex were mentioned as criteria for hiring. Medium-sized banks seemed to be willing to admit these biases more openly than the large banks. Another important finding was that bank executives were not interested in new hires' future growth potential: large banks gave a slightly higher rating to this criterion, but still only 5% of all respondents have indicated that this was important. Finally, another finding that may come as a surprise to Western HR/HRD professionals is that new hires' psychological characteristics were important to only 20% of large banks, and 6% of medium-sized banks. One possible explanation of this could be the historical legacy of the communist regime, which treated people as parts of a mechanism, not individuals with unique traits and abilities.

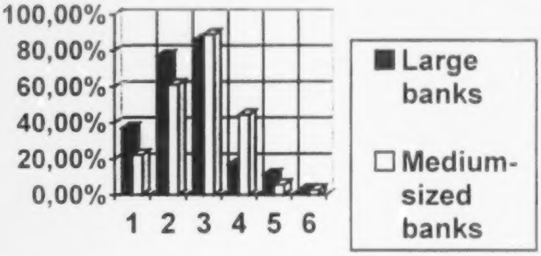
Types of employee development programs. The majority of banks preferred education and training options that minimized time spent away from the workplace: close to 90% of all respondents preferred to send their employees to conferences and seminars, and 78% of large banks and 60% of medium-sized banks were willing to pay for evening degree programs at colleges and universities (Figure 4).

An indication of the technological progress made by Russian education and training institutions in recent years was that 43% of medium-sized banks used electronic media (CD-ROMs and Internet) to deliver in-house, on-the-job training. Contrary to our expectations, only 16% of large banks used these technologies.



1. Practical work experience
2. Education in theoretical foundations of the banking industry
3. Knowledge of related fields
4. Strong recommendations
5. Knowledge of foreign languages
6. Age
7. Sex
9. Future growth potential
10. Personal characteristics

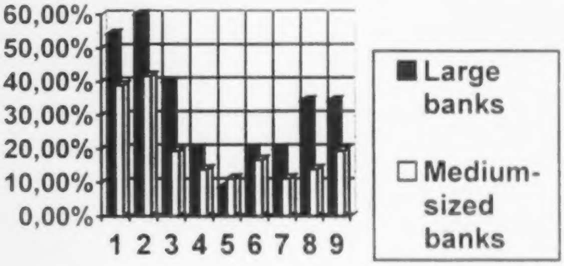
Figure 3. Which characteristics of job candidates are most important in hiring decisions?



1. Full-time degree programs
2. Evening and part-time degree programs
3. Participation in seminars and conferences
4. Online and CD-ROM training in the workplace
5. Internal instructor-delivered training
6. Short-term off-site training courses delivered by outside providers

Figure 4. What are the most important forms of education, training and development used by banks? (Respondents were asked to select three most important forms)

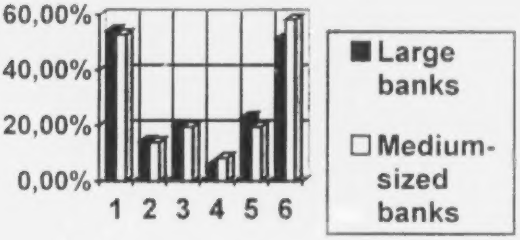
What types of education and training providers were used by the banks? Under this rubric, two findings deserve special attention. First, state-owned institutions seemed to command higher respect and trust: more respondents were willing to work with these institutions than with private institutions. Second, more than 30% of large banks and about 20% of medium-sized banks had internal centers or departments of employee development (Figure 5).



1. Public universities
2. Professional development schools associated with public universities
3. Business schools run by the public universities
4. Business development centers run by public universities
5. State-owned institutes for professional development
6. Private colleges and/or universities
7. Private business development centers
8. Private schools of business
9. Internal centers or departments of T&D

Figure 5. Which education and training providers are used by your banks?

Preferences for future forms of education and training. The answers to this question indicate, again, a strong preference for working with Russian state-owned institutions, and point out two other future trends: a strong preference for degree programs, and a trend towards the internalization of employee development. Content analysis of additional comments made by respondents suggests that one of the reasons for the trend toward internalization was a general perception that banks were not getting a good value on the open market (the price of outside non-degree programs was high), combined with banks' reluctance to allow their employees to spend substantial time in off-work training.



1. Degree programs at leading Russian state-owned educational and training institutions
2. Non-degree programs at leading Russian state-owned institutions
3. Degree programs at leading Russian private institutions
4. Non-degree programs at leading Russian private institutions
5. Foreign study trips
6. Internal training at the bank's own center for employee development

Figure 6. What forms of education and development would the banks prefer to use in the future?

What was the delivery potential of the education, training and development institutions? What were the perceived problems and barriers hindering the development of the education, training and development system in the Russian banking industry? The majority of respondents believed that one of the important barriers for the development of the system was turbulence in the industry: 91.5% of bankers and 100% of educators characterized the situation as highly turbulent, or transitioning from a turbulent stage to a more stable one. Both groups also agreed on top three major barriers for the development of banking industry and the related education and training system in Russia: economic instability (70.4% for banks, and 76.9% for educators), political instability (53.5% and 53.8% respectively), and inadequate legal system (54.9% and 69.2%).

Further, we asked *directors of educational institutions* how often they were updating their programs. The respondents indicated that, given the turbulent state of the industry, updates once a year were necessary to keep up with all the changes. However, only 53.8% of respondents indicated that they were updating programs every year, and 23.1% - once every two years. A logical continuation of the above line of inquiry was a question about the relationship between the curriculum and practical needs of the field. A direct question about this relationship would not have yielded useful information. Instead, we opted for asking about the level of practical experience of the faculty. The majority of respondents (61.5%) indicated that only about 10% of the faculty members in their institutions had practical experience. One of the reasons for the lack of faculty with practical experience and ties to the industry could be difficulty with recruiting qualified new faculty. When asked whether they had problems with recruiting qualified new faculty, 15.4% of respondent indicated that: they had these problems, since there are very few qualified faculty candidates available, and 61.5% had these problems because they could not offer compensation competitive with the private industry levels.

Conclusions and Implications

Implications for understanding international HRD theory and practice. The study results point out the following areas where the conceptualization of HRD may be different in the U.S. and in other countries: a) the place of HRD in larger systems and the relative importance of HRD and other HR-related issues; b) HRD as a part of a larger education and development system; c) the importance of long-term HR and HRD strategies and activities versus short-term results orientation; d) internalization of training and development versus outsourcing.

a) Study participants (the industry executives and the educational leaders alike) were not regarding HRD as a function in its own right. In all 70 banking organizations in this study, HRD was performed by HR departments (called "personnel departments" in Russia); in many cases, training and development was conducted by the same people who perform other HR activities (selection, recruiting, compensation and benefits, etc.). This observation corresponds to the results of our earlier survey of 256 Russian manufacturing and service companies (Ardichvili et. al., 1998), which suggests that this phenomenon may not be specific to just the banking industry.

Discussing the relative importance of different HR and HRD issues, it is interesting to compare our findings with the results of a study conducted by Towers Perrin (1992) in Western Europe, North America, Asia Pacific, and Latin America. The Towers Perrin study provided rankings of top 5 HR goals necessary for business success in the year 2000, as perceived by HR executives. The comparison of our findings with the Towers Perrin results shows that HR/HRD priorities in today's Russia are different in many respects from those of countries in other regions of the world. For example, the linkage of HR to business strategy was ranked high (goal number 1 or 2) in most countries in Towers Perrin sample. In the U.S., the idea that HRD should play an important role in organizational strategy development is gaining strong support both among academics and practitioners (Torraco & Swanson, 1995). Our study has demonstrated that this is not the case in Russia, at least in the banking industry: for Russian banks increasing the strategic role of HR/HRD had a low priority. Further, training and development was not mentioned as one of 5 priority goals by any of the Towers Perrin participants, except for Japan (in this country, it received a low ranking of 5). In our study, the participants have given a medium to high importance to training and development. There were also some striking similarities in responses between the two studies. In the Towers Perrin study, developing a strong organizational culture has received, overall, a medium to low ranking (from 3 to 5 for most countries; and not mentioned at all by any of the European or North American countries, with the exception of France). In our study, the development of the organizational culture and organization design has received much lower ranking than such issues as selection, hiring, promotion, and career development.

b) The study participants repeatedly referred to education and training of their employees as part of a "system." When talking about the inability of the "system" to address the lack of qualified personnel, they were not making a distinction between colleges providing education for entry entry-level employees, and those providing later professional development services. The implication for Western HR/HRD professionals is that attempts to understand any part of Russian business and industry-based training and development system in isolation from the larger education system may be even more dangerous, than ignoring these systemic relationships in other settings, where the perceptual link between the elements of the system is not as direct.

c) Russian banks were putting a strong emphasis on selection and recruitment, while paying less attention to continuous improvement of employees' skills, or assisting them in realizing their long-term growth potential. This could be related to the general perception of high turbulence in the industry and economy, the need to achieve fast, immediate results, and reluctance to invest for the long term. This finding has an important implication for any attempts by Western organizations to provide HRD assistance to Russian banks: if Russian organizations are not concerned with their employees' future potential and growth, will they invest in long-term learning programs and/or organization development interventions? And will they be ready to espouse the organizational learning paradigm, which requires long-term commitment on the part of both employers and employees?

d) Many participants in this study had a strong preference for internalization of employee development, through creation of own employee development centers. In the U.S., the recent explosive growth of corporate universities (an evidence of internalization trend) was accompanied by a trend in many other companies towards outsourcing the training function (Bassi, Cheney, & van Buren, 1997; Training Director's Forum, 1996). If supported by research in other industries, our findings about internalization would suggest that Western educators and consultants may need to shift their focus from developing joint programs exclusively with Russian educational and training institutions (which has been the predominant mode of entry into Russian education and HRD market so far), and explore the options of working directly with larger business institutions, assisting them in creating corporate universities and training centers. Further, the study has demonstrated that government-owned institutions commanded higher respect among bankers. An implication of this finding is that Western HRD professionals and academics need to be very selective in identifying partners in Russia: a private institution may have sufficient financial resources, but may not have the level of credibility necessary for the success of specific educational and research efforts.

Implications for the development of education and training systems in industries in transition. The study has demonstrated that the issues and processes of education and training within a legal and organizational framework undergoing radical transformation, are substantially different from those existing in more stable environments. Given the evolving nature of the banking sector and its environment, the models of education and training developed for established frameworks, are not likely to apply. For example, structuring a loan contract should take a place within a well-defined legal framework. In Russia, laws governing business transactions (corporate law or commercial code) are still not well articulated, and are subject to frequent changes. Therefore, credit and loan training would need to concern itself with the evolving nature of contracts and constantly changing government regulations in this area. A major implication of this is that both the higher education institutions, and the industry employee development systems need to be highly flexible and able to accommodate frequent updates to the curriculum. In this situation, a modular approach is likely to work the best: a program of core skills, likely to remain relatively constant, could be introduced for all levels of employees. These skills can be complemented by a set of "pick-and-choose" modules available for building more organization-specific programs. Finally, the modules need to be flexible enough in their design to allow for frequent updates triggered by changes in regulations, macroeconomic conditions, and the banking sector dynamics.

This study has pointed out another challenge for education and training institutions in a transitional economy: the lack of qualified faculty with practical work experience. This should be regarded as a serious problem: when the environment is changing fast, the faculty members' ability to stay current on the industry developments becomes even more important than in more stable environments.

Future research directions. The study suggests the need for further exploration of differences in importance of HRD and HR activities and related goals for organizations in different countries. It would be important to trace these differences in priorities to specific socio-political, organizational, and cultural frameworks (Aycan et al., 1999; Hofstede, 1997; Triandis, 1993). Another promising direction of research would be an exploration of the evolution of workforce education and training systems in select industries in a number of countries. Concentrating on specific industries would allow us to control for industry effects, while helping to determine the role of national culture and socio-political climate in systems' evolution.

A related research suggestion is to conduct studies in other key industries of the Russian economy, to determine whether the findings of this study are idiosyncratic to the banking industry. The proposed studies should address, as a minimum, the following issues: the place of HRD in larger enterprise management systems and the relative importance of HRD and other HR-related issues; HRD as a part of larger education and development system; the perceptions of the importance of long-term HR and HRD strategies and activities versus short-term results orientation; preference for internalization versus outsourcing. On cross-national level, a comparison with the U.S. and a number of other countries could be performed to determine whether the outsourcing versus internalization trends show industry patterns across countries.

Further, our study has demonstrated that the need for organization culture and organization design work arises with the size: large banks mention this as an important issue much more often then the medium-sized banks. We need to explore the stages of growth implications of this finding: When does the need for OD interventions arise, and is there a pattern and sequence in development of this need? This line of investigation should be pursued both in Russian organizations, and in comparative studies involving other countries, and build on existing studies of organization growth and related changes in HRD/OD needs (Churchill & Lewis, 1983; Greiner, 1972).

Switching our attention from research questions to the issues of methodology, we should point out that the study helped to identify an important problem associated with studying HRD issues in transitional economies: an extreme volatility of phenomena under study. In transitional economies, the HRD systems themselves, and the surrounding economic and political environments change so fast that the approach used in most international research—analyzing the phenomenon at a particular point in time—may not work. The research should, instead, concentrate on the "cascade of changes" (Kanter et. al., 1992), and involve longitudinal research.

Finally, we believe that it is important to involve Russian HRD scholars in all proposed studies for two major reasons. First, the involvement of country experts helps to avoid numerous methodological problems with equivalency and validity of research questions, instruments, and procedures (Teagarden et. al. 1995). Second, the ensuing research dialog will facilitate the development of HRD knowledge and practice in Russia, by allowing Russian colleagues to examine their own assumptions and believes, while comparing these assumptions to those held by the Westerners. This approach to learning and sharing expertise helps to avoid numerous problems associated with the direct knowledge transfer approaches.

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High Performance and Human Resource Characteristics of Successful Small Manufacturing and Processing Companies

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The author interviewed executives from 31 successful small manufacturing companies in Oklahoma for the purpose of identifying, among other things, their perceptions of high performance and other human resource related characteristics in their organizations. Analysis of the transcripts and observations of the workers led to conclusions . The shared high performance work practices were training, compensation and benefit packages, and selective staffing. Related practices included tuition reimbursement and sponsored activities. Human resource characteristics included low turnover and fair treatment.

Keywords: High Performance Characteristics, Human Resource Characteristics, Exporting Companies

This is a descriptive study about the high performance and other human resource related characteristics of successful small manufacturing and processing companies in Oklahoma which export a portion of their products to other countries. It consists of an exploratory survey conducted through formal face-to-face interviews which were audiotaped, transcribed, and analyzed. The survey is one phase of a research project which hopes to contribute to the identification of appropriate interventions for enhancing high performance work practices in small American and foreign companies which conduct business internationally.

The research problem is that, while small companies comprise the largest and an ever increasing proportion of the US economy, and a great many of them manufacture and/or process products, increasingly for the international marketplace, there is little reliable information available about whether or how the successful ones carry out high performance or other related human resource practices.

The data available have been incomplete. They have been gathered in so many ways and by such varying categories as to make them difficult to compare. And relatively less information has been broadly accumulated about small manufacturing companies than about the Fortune 100 related to exportation and human resource related characteristics, including high performance practices.

Overview of the Literature

There is substantial literature related to high performance work practices in the US. The future of competitiveness for the US company is related to how well its workers are trained, how flexible and adaptable they are, and whether it is a high performance workplace. (Potter & Youngman, 1995). America's management paradigm has shifted to provide employees greater opportunity to influence the outcomes of work organizations. Through changes in the design of work and a renewed emphasis on the importance of training and development, selective staffing, compensation, and information sharing, management has begun to realize the effect workers can have on the attainment of organizational goals (Levine, 1995).

High performance work practices assist people to involve themselves in the decision making and problem solving processes of their work activities. Based on an analysis of previous research, some of the most frequently implemented high performance work practices are quality circles, work teams, job rotation, total quality management, crosstraining, employee committees, training and development, selective staffing, compensation, and information sharing (Young, Snell, Dean & Lepak, 1996; Marlow, 1998).

By allowing workers to influence their work activities, organizations can take competitive advantage of the human element. Creating high performance work environments which fulfill human, social, and psychological needs allows organizations to reap the benefits of increased productivity, product quality inovation, and flexibility (Schutz, 1994; Mirvis, 1993; Marlow, 1998.)

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Small businesses have always comprised the preponderance of the economy in the US and throughout the world. The inception of the North American Free Trade Agreement (NAFTA) may have provided an additional incentive for American manufacturing and processing companies to export. And companies located in states near Mexico or Canada may be more likely to export than those located further from the borders. Finally, successful companies provide information which is more likely be emulated or adapted for increasing success in other companies. These factors have led to the identification of this target population as successful small manufacturing and processing companies which export from a southwestern state.

Purpose of the Study

The purpose of the study is to identify perceptions of successful small manufacturing and processing executives about the high performance work practices and other human resource related characteristics of their companies in the State of Oklahoma.

Research Questions

What are the perceptions of successful small manufacturing and processing executives about the high performance work practices of their companies?

What are the perceptions of these executives about the human resource related characteristics of their companies?

What are the perceptions of these executives about the export related characteristics of their companies?

Research Methodology

The methodology for the study was the conduct and qualitative analysis of interviews with top managers of small manufacturing companies which export. Transcripts of the interviews were reviewed through unstructured textual analysis. Qualities of similarity, frequency, and proximity, range of participant sources, and clarity of themes, thoughts, phrases and words were identified, sorted, and compared.

Interview Guide

A formal interview guide was developed from the feedback of subject matter experts. These experts were economists, academics, consultants, writers, and business leaders who were experienced with small manufacturing companies which export. The guide includes descriptive questions about high performance work practices, human resources, exportation, and NAFTA.

Selection of Manufacturing Companies

Interviews were conducted with one executive from each of 31 approximately 50-500 employee-based manufacturing or processing companies, or similar sized divisions of larger companies, which exported products. These were the companies which agreed to the interviews out of a population of 40 "successful" companies which had responded to a preceding mailed questionnaire sent to the entire population of 242 small manufacturers and processors in the state (1997 Oklahoma Directory of Manufacturers and Processors).

"Success" was defined as having demonstrated a profit for each of the preceding five consecutive years, and having had virtually no employee layoffs during the same period of time. Forty of the 86 companies providing usable responses to the preceding questionnaire qualified as successful under these criteria.

A wide range of industries representative of the manufacturing and processing sector across Oklahoma was incorporated into the interviews. These included, among others, sound speakers, office supply forms, technical publications, energy resource exploration, petrochemicals, food chemicals, food processing, chemical textiles, metal forging, metal alloys, wire manufacturing, tool and dye making, electrical measurement devices, heating and air conditioning products, aerospace manufacturing, small parts manufacturing, commercial furniture, and components for commercial construction.

Procedures

Interviews were carried out by one interviewer and one recorder who audiotaped each interview with two mini cassette recorders and took written notes of verbal and nonverbal responses by interviewees. The interviewer and recorder discussed and compared their impressions of each interview at its conclusion. Each interview was followed by a tour of the facility which included an observation of production processes and of worker performance and interactions. This was followed by the development of a narrative of overall impressions about the company.

Audiotapes were transcribed verbatim on disc and hard copy by a transcriptionist who was trained by the interviewer to attend to the idiosyncratic aspects of these particular interviews. Transcripts were reviewed and checked against notes, and corrected with the audiotape where indicated.

Results

All except three of the 31 participating successful companies included an identifiable human resource function in the local plant. Most had at least one full time person, and the larger companies tended to have more people. The staff sizes ranged from one part time person to eight full time members.

The high performance work practices which the study sought out were training, job rotation, crosstraining, work teams, quality circles, employee committees, total quality management, information sharing, selective staffing, and compensation. There was great variation among compaies in the number, combination, and relative investment in these practices.

Virtually all companies provided training to their employees. They used mostly internal technical training and internal and external management development. Several specified problem solving skill training for workers and managers. Several also collaborated with local vocational-technical school to provide or to expand technical and computer related training opportunities to their employees. Only four plants specifically identified crosstraining as one of their high performance strategies. Job rotation was, surprisingly, only mentioned by one firm.

One company said that, after the implementation of work teams, its profitability had doubled. It regularly assigned potentially high performers to cross disciplinary teams which were given specific organizational or technical problems to resolve. Members worked together part time on their project while continuing in their regular positions. Surprisingly, only one other plant stated that they incorporated team building activities.

Very few firms made reference to some variation of employee committees. Not a single company identified quality circles as a specific strategy. Total quality management was discussed in some detail by three plants. This was unexpected in light of the great popularity of this strategy only a few years ago.

Regarding information sharing, one company characterized itself as "open book", that it shared its profit and loss and all other figures with all employees. Several other plants discussed the importance of openness with information and communication as the basis for mutual trust.

Selective staffing was given high priority in numerous companies. The importance of hiring persons with appropriate technical skills and positive work ethics was emphasized. One plant conducted extensive testing of potential employees. Several others screened for potential permanent employees by doing initial hiring through temporary employment agencies and selecting from the "temps". Two firms stressed the value of efforts devoted to the retention of desirable workers.

Nearly all companies recognized the importance of providing competitive wages in order to attract and retain the best employees. Pay ranges varied from a low of minimum wage to $9 per hour in a component design and assembly plant to a high of $10.50 per hour for receptionists to $26 per hour for maintenance mechanics at a chemical facility.

The latter paid very high wages for its location, but seemed more than willing to do so in exchange for the opportunity to hire the best workers available. And the former claimed to be sufficiently competitive in its area because of additional forms of compensation. In fact, it cited several workers who had left for moderate wage increases elsewhere but had returned because of other benefits. Variations of compensation included profit sharing, a profit bonus pool, merit increases, and bonuses for exceeding production quotas and for perfect attendance.

Other related practices of these successful small manufacturing companies included, in descending order of frequency, tuition reimbursement for additional education, on the job training, sponsored social activities, various forms of employee recognition, the conduct of performance evaluations, and conscious efforts to incorporate fun and enjoyment into the workplace environment.

Human resource related characteristics of these successful plants, also in descending order, were low turnover, an emphasis upon fairness, the presence of an employee assistance program, an orientation toward the needs of employee families, the completion of requirements for the ISO 9000 Certificate, and the presence of an employee wellness program.

Low turnover proved to be a remarkably consistent statistic. Most of these companies identified their turnover rates as at or below six percent. Some were below one percent, with one claiming that 34 percent of its employees had reached perfect attendance records over an entire year. Only three plants identified turnover rates of 10 percent or higher.

An emphasis on fairness was stated in a variety of ways. Comments included references to trust, honesty, diversity in employee demographics, openness, ethical conduct, and the golden rule. Statements about "family orientation" took various forms, including regular activities designed for employee family participation, team sports, occasional special events, and sensitivity to the scheduling needs of employees and their families.

While all of these companies exported to other countries, most of them exported a relatively limited proportion of their products, which they considered to be less important than their focus upon manufacturing and/or processing products for the US market. Most of them were not aggressively seeking an expansion of their international clientele, and only a limited number were making modifications to their processes or products for that market. Many simply responded to specific requests for their products from international customers.

Conclusions

These successful small manufacturing companies do not incorporate the classic high performance work practices at levels anywhere near those of their larger counterparts. Some of them pay astonishingly low entry level wages, a few beginning at the minimum legal wage. And some of them are dark, noisy, or grimy places to work, with limited climate control, due to the nature of the machinery or production procedures in place.

They all seem to have at least one factor in their favor. They may pay higher wages than the competition. Or, they may provide one of a limited number of employment opportunities in an otherwise desirable locale. Or, they may offer a relatively clean and/or safe environment in which to work. Or, they may offer benefits in excess of the competition.

The plant tours and performance observations indicated that for the most part, they seemed to share a psychological climate in which managers and workers communicated in a relaxed, collegial way. There appeared to be a continuous effort to improve the processes and the products, and a collaborative approach to carrying it out, between and among managers and workers. People seemed to feel valued, and to like the work and the workplace.

The most commonly shared high performance work practices among these companies were various forms of training and development, compensation and benefit packages, and selective staffing. This pattern proved to be remarkably consistent with the emphasis placed by Levine (1995) upon the importance of these particular high performance work practices.

Of the related human resource practices, the most frequent were tuition reimbursement for continuing education and company sponsored activities for employees and their families. Among the human resource related characteristics, the most prominent by far were low employee turnover and the sense of fair treatment.

Recommendations

To the extent that these 31 small manufacturing and processing plants in Oklahoma may be representative of other small companies, the following recommendations are offered for organizational success.

1. Select employees carefully. Identify a match between the employee's skills or skill development potential and the needs of the company. Also look for a fit between the employee's work ethic and that of the company and other employees.
2. Invest in training, continuing education, and employee development opportunities in order to increase employee current and future professional and personal value.
3. Retain employees by providing them with compensation and benefit packages which are superior to the competition.

4. Empower employees by treating them as colleagues, sharing information openly, engaging them in problem solving, and sharing profits with them.
5. Honor employees by modeling fair and ethical behavior and recognizing and rewarding them for their contributions.

The companies interviewed and observed in this study demonstrate that the specific mechanisms implemented in order to create a more successful company are not as important as that they contribute to the continuous growth of the human resources individually and together within the organization.

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HR Involvement Decisions and Strategies in Mergers and Acquisitions: Four Organizational Portraits

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Although the financial and strategic aspects of mergers and acquisitions are well researched, little has been done on the human resource development implications of this popular topic. The purpose of this case study research project was to explore the timing and scope of HRD involvement in four organizations recently involved in a merger or acquisition, by using three theoretical models as lenses. The results have far reaching implications for both practitioners and academics.

Keywords: Mergers and Acquisitions, Strategic HRD, HRD Decision Making

The strategic and financial performance implications of mergers and acquisitions are a popular and well-researched topic within the literatures specific to those interests. However, studies of the point at which strategic human resource issues enter into the decisions to merge, acquire, or be acquired, and the subsequent human resource management decisions remain an illusive subject in mainstream journals read by HRD academics and practitioners. In a brief historical recap of merger and acquisition activity, Hitt, Harrison, Ireland, and Best (1998) noted that, "acquisition activity began to increase in 1992 and 1993 with more dollars invested in acquisitions during 1994, 1995, and 1996 than any previous year" (p. 91). Lipin (1997), found that in 1996 alone, over $1 trillion was spent on acquisitions globally with $660 billion in the USA. Thomson Financial Securities Data (KPMG, 1999, online) estimates the annual global merger and acquisitions transactions tab at more that $2.2 trillion. These figures represent purchases and stock transfers but do not include the costs of displaced workers, training expenditures, reinvention or total replacement of information systems, or the myriad of costs associated with mergers and acquisitions that impact any value created by them. Given the financial magnitude of these decisions and the subsequent effects that mergers and acquisitions have on people's careers, this topic warrants close examination by the HRD research community.

There are few if any phases of organizational life requiring the intense amount of organization-wide decision making that occurs around mergers and acquisitions. The relatively short time frame within which these decisions take place affords an excellent research opportunity to capture and study the multiple inputs to these decisions. This study examines four diverse organizations that have just completed, or are in the immediate post-decision phase of a merger or acquisition. The foci of these organizational portraits are the timing and scope of decision making related to retention, deployment, and utilization of human resources immediately before, during, and immediately after the merger or acquisition decisions.

Problem Statement and Research Questions

In a recent study, Hitt et al. (1998) posited three theoretical rationales for considering and executing a merger or acquisition to increase the firm's performance. They are:

1. The merged firm achieves greater market power through increased market share or multipoint competition.
2. The merged firm gains economies of scale and/or scope by combining complementary capabilities of the two firms.
3. The merged firm can access capital at lower costs. (p. 93)

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These propositions guided the selection of the research sites. Additional studies that examined larger samples (Haspeslagh & Jemison, 1991; Healy, Palepu, & Ruback, 1997; KPMG, 1999), and posited relationships between the degree (and timing) of attention to strategic human resource issues and the goals noted above, provided the foundation for the following research questions:

1. At what point in the overall decision to (merge, acquire, or be acquired) did the consideration of the retention, deployment, and utilization of the pre- and post-decision workforces become inputs?

2. In relation to the influence of other decision criteria (financial, geographic, new technologies etc.), what was the relative weight of human resource issues as a decision input.

3. To what extent are the indications of the expected performance of the new firm positively related to early and significant attention to human resource issues?

4. To what extent will "Lessons Learned" to date in relation to human resources issues be generalized to future merger and acquisition decisions?

Research Sites and Transaction Phase

Bimba Manufacturing Company: Post-Acquisition

A market leader in its field, Bimba (Chicago area corporate headquarters) manufactures pneumatic and electro/pneumatic actuators in North America. It is recognized worldwide as a leading actuator company. It has over 100 domestic and international distributors and over 500 associates. Bimba recently was able to expand their product line through the acquisition of a small manufacturing facility with a 40-member workforce in Rockford, IL. Retention of the highly specialized and trained workforce was critical to the capacity of this acquisition to create value.

Focus Wireless Communications (FWC), formerly, Cellular Wholesalers, Inc (CWI): Mid-decision to early implementation

Through being acquired by Focus Wireless Communications (FWC), CWI is moving from traditional distribution of wireless communication products (cell phones, pagers) to e-commerce (a growing capability of FWC). FWC is headquartered in Lincolnshire, IL and employs 80 people. Its pre-acquisition revenue was about $80 million. FWC post acquisition revenues are forecasted to exceed $110 million and the company employs 125 people in three primary locations. There is some duplication in the sales force post-acquisition but business lines are distinct and unique to the pre-acquisition organizational strategic capabilities.

DSM Desotech: Post-Acquisition

This company operates as a business unit of DSM Resins (Dutch State Mining) headquartered in Zwolle, The Netherlands. It is the world's leading manufacturer and supplier of protective UV curable coatings for glass optical fibers and optical cables. DSM Desotech, headquartered in Elgin, IL, employs approximately 190 people in the US and 60 in the Netherlands. More than one-third of these is technical staff. DSM Desotech has been granted more than 70 US patents related to UV/EB curable technology. Desotech recently acquired Somos, a laser-based technology company. This state-of-the-art company employed 22 highly specialized, highly skilled professional staff, all of whom were retained.

BankOne: Corporation Post-Acquisition

Headquartered in Chicago, BankOne employs approximately 95,000 people and has about $250 billion in assets. Its offices are located throughout the Midwest and Southwest and the primary business lines are retail banking, credit card services, consumer finance, commercial banking, and investment management. Merger with First ChicagoNBD is representative of the overall consolidation occurring within the financial services sector. Although this was considered a merger of equals, key strategic capability transfers were in the area of highly successful customer focus from First Chicago NBD and general management expertise, economies of scale, and greater market share from BankOne.

Theoretical Framework

This study draws on three primary theoretical frames, the *process perspective* (Haspeslagh & Jemison, 1991), the *attributes-as-predictors-of-success* perspective (Hitt, et al., 1998) and *Hard* and *Soft Keys* as described in an analysis of over 700 of the top cross border deals conducted between 1996 and 1998 (KPMG, 1999). Each of these frameworks is described below.

According to Haspeslagh and Jemison (1991), the process perspective "retains the important role of issues of strategic fit and organizational fit, but it adds the consideration of how aspects of the acquisition decision making and integration processes can affect the final outcome" (p. 306). This perspective combines the strategic and organizational behavior research streams in an effort to discover new insights about the growing capital redistribution and potential value creation phenomena. Mace and Montgomery (1962) laid the foundation for this perspective and acknowledged that:

> A central feature of Jemison and Haspeslagh's (1998), research is their interactive model of acquisition integration approaches and integration process issues. This model categorizes the strategic goals for the acquisition or merger along the dimensions of absorption, symbiosis, or preservation and permits the examination of how expectations, leadership, and boundaries are managed and reformulated during and immediately after the decision. (p.157)

Low interdependence and high autonomy characterize the preservation approach. It is the approach of choice when the objective of the acquisition is to keep the acquired company distinct and independent from the acquiring organization. Haspeslagh and Jemison found that many of these acquisitions had a "nurturing quality" with great effort and resources expended to retain and then transfer strategic capability. This evolutionary approach is particularly desirable when the acquiring firm is moving into a new domain (p. 159).

The absorption approach requires a high degree of interdependence and a low degree of autonomy with the ultimate goal of complete consolidation of both organizations. Timing of the integration process is critical to the success of the absorption approach. Haspeslagh and Jemison noted, "A useful rule of thumb is such situations is 'move as fast as possible'. . . . The benefits of waiting for extra information are limited and the costs of inaction are high, because postponing foreseeable rationalizations will prolong uncertainty" (p. 158). Performance problems and high turnover (of the most talented organizational members) are the predictable outcomes of uncertainty.

Considered the most challenging approach because of the desire for both high autonomy and high strategic interdependence, the symbiotic acquisition strives to create an amalgamated organization with "each firm taking on the original qualities of the other" (p. 149). Unlike the absorption approach, speed in the integration process can spell disaster. Research findings indicate that the most successful symbiotic acquisitions occur when, "the acquired company itself changes its own organizational practices to adapt to the new situation" (p. 149).

These three types of integration approaches as described above provided the central organizing elements for this study along with indicators of success and predictors of failure identified in several other studies summarized below.

Hitt et al. (1998), in a study of 24 acquisitions, provided strong empirical support for organizational attributes that affect post-acquisition performance. The authors noted that, "findings both supported and contradicted commonly held beliefs about acquisitions, as well as highlighted variables not typically associated with acquisition strategies" (p. 91). Attributes of successful acquisitions were found to be: complementarities that built on exiting capabilities, friendly relations between the joining firms, low to moderate debt, deep experience with change initiatives, emphasis and skill in innovating, selection of acquisition targets that would support continued emphasis on the core business, careful attention to selection of acquisition targets, and "financial slack" described as large amounts of available cash or a highly favorable debt position (p. 98). In addition to the absence of these attributes, unsuccessful acquisitions were characterized by unethical behavior by the senior management teams immediately before, during, or after the decision to join, multiple and simultaneous acquisitions, and diversification into unfamiliar businesses (p. 99). Finally, in a recently released merger and acquisition benchmarking study by KPMG (1999), in which shareholder value was used as the measure of success, the determinants of success were set by equity performance pre- and post-deal and these compared individual company performance against its own industry trends (online) Based on these comparisons, deals were distributed into three bins: "Those that failed to create value, those that neither created not destroyed value, and those that exceeded the industry trend" (online). Three *Hard Keys* and three *Soft Keys* characterized successful deals. When careful attention was paid to the *Hard Keys* such as the rationale for the acquisition (synergy evaluation), integration project planning, and due diligence, and when the *Soft Keys* were satisfied, such as thoughtful selection of the management team, ample attention to blending cultures, and non-stop communication, success followed (online).

These frameworks provided the criteria for interpretation (Yin, 1989), used to examine the interview data from senior executives in the four participating organizations. In addition, the researchers were particularly interested in when the senior HR executive was included in the decision-making process, and to what extent his/her participation guided the integration process.

Methodology

Research is generally accepted as being essential to the production or advancement of knowledge about the world or a specific phenomenon (Merriam, 1998; Merriam & Simpson, 1995). The basic conceptualization of research is that more is known about a phenomenon after engaging in the research process than was known before engaging in research (Merriam & Simpson, 1995). "The research problem is a catalyst for transferring one's general curiosities into a workable tool for planning and guiding research" (Merriam & Simpson, 1995, p.16) and exists as a gap in a given knowledge base. Merriam (1988) stated that there are three types of research problems: action, conceptual, and value. This study is directed toward identifying the specific actions (decision inputs) related to pre- and post-merger and acquisition firm configurations pertaining to the retention, deployment, and utilization of human resources.

Inductive reasoning, in which individual events are observed and interpreted drives this study. Insights gained from it may be viewed as "tentative hypotheses that help structure future research" (Merriam, 1998, p. 41). Hopefully, these tentative hypotheses can later be rigorously tested through future research studies. In addition to utilizing inductive reasoning, Merriam (1998) described four other characteristics of qualitative research. She defined qualitative research as "an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena" (p. 5). She proposed that qualitative research:

- provides an understanding of the event from the participant's view,
- utilizes the researcher as the instrument of data collection,
- involves fieldwork, and
- results in a richly descriptive product.

Selection of the Method

The case-study tradition (Creswell, 1998) was selected from among the other qualitative traditions-biography, phenomenology, grounded theory, and ethnography. Merriam (1998) advised that this tradition is particularly useful when the research is focused on understanding process. Yin (1989) proposed that case studies are best suited in situations in which the goal of the research is to "to expand and generalize theories (analytical generalization) and not to enumerate frequencies (statistical generalization)" (p. 21). Merriam (1998) further indicated that case-study design is normally employed to gain understanding and meaning from a given situation, rather than to test a certain set of variables. Discovery is its main utility rather than confirmation, according to Merriam. Yin (1989) indicated that case study is particularly useful to research questions involving "how" and "why" (p. 19), and cautioned that there are five steps in the case study research design that are particularly crucial:

1. The research questions,
2. Any propositions,
3. The unit of analysis,
4. The logic linking the data to the propositions, and
5. The criteria for interpretation.

These five steps deserve particular attention in this study. The research questions and the propositions supporting them were described earlier in this paper. The propositions described by Hitt et al. (1998) were the key determinants for site selection. The criteria for interpretation followed the theoretical frameworks noted above. With regard to the unit of analysis, Merriam (1998) stated that it could be "an individual, program, event, group, intervention, or community" (p. 19), and Merriam and Simpson (1995) indicated that it could be a "social unit such as an individual, group, institution, or community" (p. 108). Creswell (1998) agreed when he wrote that the unit of analysis could be "a program, an event, an activity, or individuals" (p. 61). In this study, the unit of analysis is individuals in key decision-making roles. These leaders are in upper level, senior management positions who have enormous influence and power within their organizations, and who are personally responsible for making and implementing the merger or acquisition decisions. Two senior executives from each organization participated in lengthy interviews. In each case, one executive was the senior HR person, and the other held either a cabinet level or senior VP role. The selection criterion for this individual was high involvement in the actual decision to enter into a merger or acquisition. Documentation of internal communication and public announcements were used as a triangulation measure to validate the interview data. Creswell (1998) defined the context of the case as "its setting, which may be a physical setting or the social, historical, and/or economic setting for the case" (p. 61). In this study, the immediate contexts of the cases are the organizations in which these leaders are situated and operate. Naturally, each organization exists within its own external context.

Limitations of the Study

Stake (1995) warned, "Case study research is not sampling research" (p. 4). Case-study research is not intended to provide generalizability to the population as a whole. Some method of site or case selection must exist, however. Merriam (1988) advised that the preferred method of choosing cases is "nonprobability sampling" (p. 47) or disregarding the probability that all cases have equal chance of inclusion in the research sample. However she recommended "purposive" (Chein, 1981) or "purposeful" (Patton, 1990) sampling. This method of sampling, Merriam (1988) indicated, is "based on the assumption that one wants to discover, understand, gain insight; therefore one needs to select a sample from which one can learn the most" (p. 48). Consistent with these propositions, the four sites selected for this study present diverse perspectives but are aligned with Hitt's et al. (1998), theoretical propositions for engaging in merger or acquisition activities. Although post hoc fallacy is always a concern when capturing descriptions from participants, one of the primary goals of this study was to understand more clearly how key decision makers interpreted the relationships between their decisions and the subsequent organizational responses. Every effort was made to maintain interrater reliability through the intake process; interviews were either conducted by two researchers taking extensive notes or they were tape-recorded. All three researchers independently coded the interview data and resolved differences through consensus.

Results and Discussion

Probably the single most compelling insight gained from the content analysis was the secrecy and urgency surrounding the actual decision to merge or acquire. Given the "megatrend" of these deals in the current business environment, several of the non-HR executive interview subjects noted that, "It isn't a matter of if we will do this; it's a matter of when." In other words, environmental scanning for possible deals is continuous and when the right alliance or target appears on the radar screen, the top decision makers in the organization move and move fast. In no case did the actual decision to merge or acquire include hands-on input or guidance from the senior HR executive. However, the identification of the HR leadership is one of the decisions made in the identification of the top leadership team. The process for selecting the top leadership team (including the top HR executive) varied somewhat by research site but in all cases the teams were named as soon as verbal agreements to make deals were reached. None of the organizations studied are more than eighteen months post decision and FWC closed its deal on November 1, 1999. During the interviews, several executives noted that, "it's too soon to reflect." Although this statement may indicate a reluctance to make predictions of success, interviewees were not hesitant to critically evaluate what went well, what did not, and what they would do differently next time.

The responses to the four research questions are summarized below.

Table 1
Responses to Research Questions

Site	Question 1	Question 2	Question 3	Question 4
Bimba	Integral part of the decision to make the deal – the issue itself, not presented by the HR executive	Minimal – goal of preservation indicated that they should keep "hands off"	Minimal – success understood to come from synergy evaluation, not hi-touch HR	Moderate – would increase attention to selection of top management and culture issues
DSM Desotech	Integral part of the decision to make the deal– the issue itself, not presented by the HR executive	Critical – 100% retention was the goal	High-retention goals met so far	Moderate – given similar circumstances would repeat HR initiatives – they worked
FWC	Immediately after decision to deal	Minimal –knew there would be some challenges but other factors were more important	Minimal in formal HR planning terms – however, due to small size of both orgs, mgmt and HR "hand held" the transition period	Too soon to tell – always need to do more
BankOne	Immediately after decision to deal	High – large workforce, reduce as much uncertainty as soon as possible to retain key people	High – especially in relation to communication and speed of implementation planning and execution	Very High – consolidation and transfer of strategic capability are the determinants of survival in financial services today – "We must become experts in mergers and acquisitions"

The overall weight of HR planning and the early entry of these concerns (in most cases once the decision to merge, acquire, or be acquired had been made) impressed the researchers. The often-repeated refrain with clients begins with, "Ever since we were acquired (or merged with, or were bought out by. . .) we have been unable to do such and such." The task then as HRD consultants is one of a clean-up crew leading to the assumption that if HR planning had been done right in the beginning, these problems would not be here. This is a problematic assumption because, even when everything is executed perfectly, the bottom-line is, people have to change and people don't like to change! The most carefully selected target and crystal clear due diligence can make the deal happen but can't make the deal succeed. Over and over, the interviewees stressed the need for emphasis on the people issues. The senior executives in these organizations expected rapid implementation of HRM, including the complex integration of diverse compensation and benefit plans and they got it. What gave them pause were issues such as the unanticipated fallout effects of reduced productivity, interface management, and, in a few cases, the need for termination, or unexpected resignations of a few key senior managers.

The following table summarizes the findings from the interview data and document analysis:

Table 2
Summarized Responses From Organizations Grouped by Research Framework

Analytical Framework	DSM Desotech	FWC	Bimba	Bank One
Jemison and Haspeslagh (1998)	Preservation	Symbiosis	Preservation	Absorption
Hitt et al. 1998)	• R & D/ Innovation • Focus on core business • Selection of target	• R &D/ • Innovation • Focus on core business	• Focus on core business • Selection of target	• Focus on core business • Change flexibility • Selection of target
KPMG (1999)	• Synergy evaluation • Due diligence • Integration project planning • Top management selection • Communication	• Synergy evaluation • Due diligence • Top management selection • Communication	• Synergy evaluation • Due diligence • Communication	• Synergy evaluation • Due diligence • Integration project planning • Culture • Communication • Top management selection

The summary presented here in table format indicates the presence of attention to the various attributes or characteristics described in the theoretical framework. Inclusion of a given factor for a particular site does not necessarily mean that the interview subject believed that the process had been done in an exemplary manner. However, it does indicate that there was serious intention, pre-planning, and decision making in regard to these aspects of merger and acquisition planning and implementation. Absence in the table of aspects of the various analytical frameworks indicates that, in the prioritization process, those factors did not seem as important (critical to the success of the deal) as the ones that are included. Did the executives make the right decisions and set the right priorities? The ***Lessons Learned*** section presents some insights that are apparent right now. However only the future value created by the decision can determine the merit of the path they took.

Lesson Learned and Implications for Research and Practice

In the most general sense, each of the participating organizations would increase the amount and types of communication to the workforce. For BankOne the lesson learned was that although there was ample information available on business unit level goals, objectives, and timeframes, employees were hungry for more information on corporate level goals and strategic capability transfer. FWC thought they could have done more to communicate to people what to expect between the time the deal is announced and when it closes. Delays that the senior management teams on both sides fully expected caused a substantial loss of energy and productivity among the ranks. DSM Desotech spent so much energy focusing on acquisition side, that they later discovered problems cropping up in the area of interface management. If they could go back and do it over, they would increase the communication to the departments of the acquiring organization that would be dealing regularly with the new acquisition. Finally, Bimba would have more closely examined the issues of blending organizational cultures and used communication (written and verbal) to smooth the transition. The goal of preservation (Haspeslagh & Jemison, 1991), of the uniqueness of the acquired organization was highly influential in the communication strategies employed by DSM Desotech and Bimba. Looking back, they realized that more and different communication would have helped them rather than hindered them.

Other areas that some of the research sites mentioned when asked about lessons learned were:

- More attention to transition plans and transition teams at the business unit level.
- More attention to, and earlier resolution of, information system management, systems integration, or systems replacement.

Only one site reported that they would seek earlier and greater involvement from HR in future mergers or acquisitions. In a summary of three recent studies (Eichinger & Ulrich, 1995, Rothwell, 1996, and Vicere & Prescott, 1997), Rothwell (1998) identified six key roles for HR leaders:

1. Change agent
2. HR strategist
3. Business strategist
4. HR functional aligner
5. Partner to general mangers
6. Problem solver and consultant (p. 31).

This study revealed that HR expertise was counted on for implementation planning, but clearly on a more tactical level, in all sites except BankOne, as characterized by the last three of the competencies listed above. It was not surprising to the researchers that HR input was not sought during the actual strategic decision to engage in a particular merger or acquisition, nor was there any evidence that it will ever be valuable or appropriate during that stage of the process. However, it was clear from the interviews that expert HR input was essential as soon as the decision was made. Predictably, lessons learned strongly indicate that a broader more strategic HR role would serve to help manage the transitions, communication, and integration processes critical to the success of a merger or acquisition. This insight, coupled with the idea noted earlier that mergers and acquisitions are becoming the norm for organizational survival and growth, lends a different perspective to how the HRD profession should understand its roles and responsibilities. Industry-specific culture change management (combining the first and third competencies noted by Rothwell, 1998) may be the most important strategic role for HRD in assisting organizations with mergers and acquisitions.

Conducting research that investigates and analyzes the HRD issues specific to the tumultuous and high impact merger or acquisition decision-making process is an important step in providing systematically developed best practices for HRD decision making and implementation planning under these stressful and unpredictable conditions.

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The Impact of Participating in Human Resource Development Activities on Individuals' Job Level and Income

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This paper addresses the question as to whether individuals benefit from participating in HRD activities. In particular, the question is addressed whether participating in these activities lead to a higher job level and/or higher income. The results, obtained through means of a linear regression analysis and based on a sample of 1957 respondents, show that participating in HRD activities has a significant but modest impact on individuals' job level. In fact, HRD activities are the secondly most explaining group of variables with regard to the variance in job level. Subsequently, participation in HRD activities has also a significant, but very small impact on individuals' income. Other variables included in the analysis, such as gender, level of initial qualification, work experience, and job level explain far more of the variance in income.

Keywords: Training Benefits, Job Level, Income

Education in our modern society seems to be more and more a prerequisite to obtain attractive jobs with high incomes. It is said that a successful career is a result of initial education (Becker, 1975; Boon, 1993; Meesters, 1992; Peschar & Wesselingh, 1995; Oosterbeek, 1992; Thijssen, 1995; Tuijnman, 1993). Especially from the educational level great benefits can be expected further in one's career. The long tradition of research into the relationship between educational level and income confirms this repeatedly.

Basis for this notion lies in the Human Capital theory developed by Becker (1975). In this theory students are thought to be investors, making a choice between spending time on income-generating activities and spending time on educational activities. In line with micro-economic thought, it is assumed that the income received as a result of time spent in education is the benefit the student strives to maximize in order to maximize his utility. The main focus of studies using this framework has been to determine the actual returns of education to the individual.

In the Netherlands an important contribution is delivered by Glebbeek (1993), who has developed and studied a model for estimating effects of initial education on career development. He has found that education has a direct influence on income (.35), and an indirect influence via jobs persons held in the past (.71), jobs they hold later in their career (.45), and management functions they hold (.32). The magnitude of this indirect influence on income is .15. Peschar & Wesselingh (1995) conclude that this means that persons with the same jobs have different incomes according to the differences in their educational history. They state that this is according to the human capital theory that states that more education always pays.

The most recent development in this field is summarized by McMahon (1997). In this review he states that researchers over the last years have attempted to arrive at a comprehensive estimate of the current total returns to education as objective as possible, that is, to estimate these returns without overestimation or underestimation. As a result, economists have more than ever been able to detect the true effect of education on earnings. Moreover, these results show that some of the returns to education may have been seriously underestimated in the past.

But what can be said of the returns of HRD activities? Do they also pay off? We know that because of many economic, social and technological developments production and services processes change rapidly and that work becomes more and more complex (Barham & Rassam, 1989; Bergenhenegouwen et al., 1995; Bomers, 1990; Diedrich, 1988; Dixon, 1992; Tjepkema, 1995; Tuijnman & Van der Kamp, 1995). Over time the value of initial qualifications decreases and the individual's employability can only be guaranteed by additional HRD activities. So there is a need to permanently invest in HRD activities after individuals have entered the labor market.

Mincer (1979, 1989) has built on this idea by stating that individuals, after they have finished their initial education and have entered the labor market, guarantee their employability by continuously investing in HRD activities. Moreover, his theory predicts that these activities increase their human capital, which in turn leads to a higher income on the labor market. This notion is supported by several studies investigating the effects of

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participating in corporate training. For instance, a study conducted by Groot (1994) in the Netherlands showed that participants of corporate training earn 11% more than non-participating members of the work force. Similar results were found in studies conducted by Barron, Black & Loewenstein (1989), Holzer (1988) and Mincer (1989). However, other results can be found in studies conducted by Boon (1993) and Tuijnman (1989). These studies found that HRD activities had no impact at all.

This paper builds on the notion developed by Mincer by exploring the effect of HRD activities on the income of higher educated professionals. In this paper HRD activities are considered as any post-initial training activities that are aimed at improving the personal employability or at developing oneself personally. More operationally, HRD activities are defined as all types of training activities that range from short but thorough management or communication training activities, follow-up language courses or software training modules, more specialistic corporate training development programs, to extensive, formalized post academic studies or Masters of Science programmes. All respondents were explicitly asked to refer to these types of HRD activities only.

The relationship between HRD activities and income is difficult to study, as there are many variables related to the distribution of income. Work experience is one important example (Cohn & Geske, 1990), in particular since it can act as a substitute for training and education. Moreover, research has shown that there are gender differences and differences between workers in different economic sectors: ceteris paribus women end up in less managerial positions and earn less too, while workers in the profit sector earn more than workers in the non-profit sector (Meesters, 1992). Given these other factors affecting income, the general research question we try to answer is:

Do Human Resource Development activities affect future job level and income of higher educated professionals?

Subquestions are:

- *Is there any relationship between Human Resource Development activities on the one side and job level and income of higher educated professionals on the other side?*
- *How strong is this relationship?*
- *How can this relationship be seen in comparison to the effect of other variables such as gender, initial education, work experience, job level and labor market?*

Methodology

Conceptual Framework

Based on the literature described above the following exploratory model was developed to study the research question at hand:

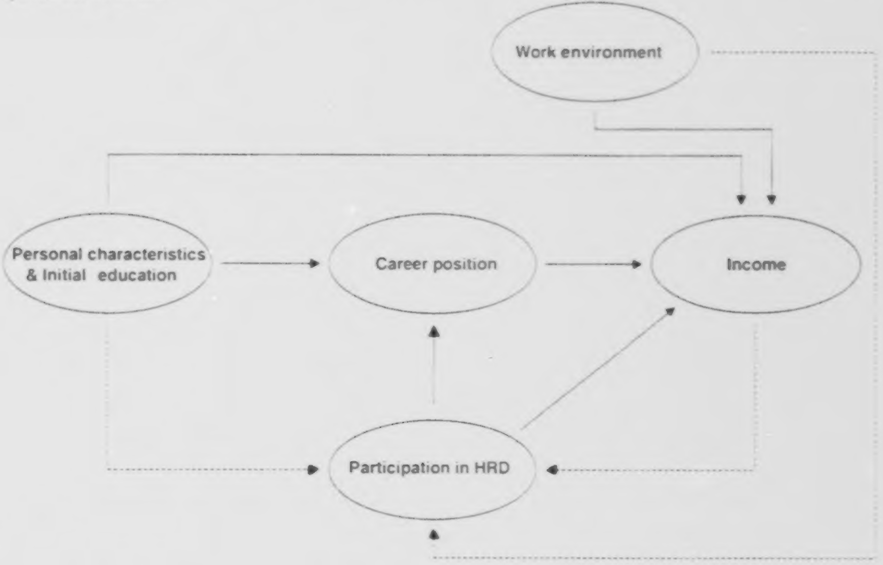

Figure 1
Exploratory model of the relationship between participating in HRD activities on the one side and job level and income of higher educated professionals on the other side

Firstly, this model proposes that personal characteristics (such as gender, work experience and career expectations) and initial education (especially educational level but also field) affect individuals' career position, income and participation in HRD activities. Secondly, it proposes that participation in HRD activities affect individuals' career position and their income directly. Thirdly, it assumes that participation in HRD activities affects income indirectly by promoting their career position. Finally, the model takes into account that income and participation in HRD activities are a function of environmental factors such as the economic sector of the organization and the size of the organization.

As can be seen, the exploratory model has been limited slightly. Only the relationships marked with solid arrows have been tested in the model mentioned above. The relationships with dashed arrows have been left out of consideration.

Operationalization

To test the exploratory model a questionnaire has been develop. The resulting questionnaire comprises 59 questions in the following categories: 1. General questions, 2. Highest initial education, 3. Start on the labor market, 4. Career history, 5. Present situation, 6. Career intentions, 7. Additional training history, 8. Most important additional training program, and 9. Plans for further participation in training.

These categories all reflect relevant issues in the literature concerning individuals' career development and are directly related to the variables in the exploratory model. More specifically, the following variables are selected:

Personal characteristics

- Gender (0=female, 1=male);
- Social background (0=parents without any vocational college or university degree, 1=parents with a vocational college certificate or university degree);

- Number of years of work experience (#);
- Received a higher qualification of a regular educational institution (0=no, 1=yes);
- Career ambition (5 items).

Initial education
- Level of initial education (0=vocational college; 1=university);
- Field of initial education (0=with very good prospects on labor market, 1=with less good prospects on labor market);
- Perceived quality of initial education (11 items).

Participation in HRD
- Total time (in working weeks) spent on short training programs per year (#);
- Total time (in working weeks) spent on long training programs per year (#);
- Nature of most important training program (0=specialization/updating, 1=retraining);
- Individual's goal of most important training program (0=personal development, 1=career development);
- Total time (in working weeks) spent on most important training program (#);
- Certification of most important training program (0=no, 1=yes);
- Perceived career effect of most important training program (8 items);
- Perceived personal value of most important training program (7 items).

Career position
- Job level (5 categories).

Work environment
- Economic sector of the organization (0= profit, 1=non-profit).
- Size of the organization (number of employees);
- Organizational training facilities (0=no, 1=yes).

Income
- Gross earnings per annum (corrected for size of the job i.e. the number of hours an individual works per week; 20 categories).

The meaning of most variables is clear, except (may be) the variables perceived quality of the initial education, perceived personal value and career effect of the most important training program, and a person's career ambition. The first variable measures the contribution of the initial education to finding a job. Therefore, participants in the survey were asked to indicate whether or not their initial education contributed to aspects such as finding a job easily, finding a job with high salary, finding a job with good career prospects etc. The second and third variable measure the contribution of the most important additional training program to a person's personal c.q. career development. In case of the contribution of the most important training program to someone's personal development the participants were asked to express this contribution in terms of whether it has supported their personal development and has raised one's work motivation, the extent to which the program has contributed to a better social functioning, or has resulted in an increased number of social contacts. In the same way participants were asked to express the career developmental effect of the most important training program in terms of an increased employability, the extent to which this training program has supported one's own career development or has resulted in promotion within the organization, the extent to which the program has contributed to a better position on the labor market, whether it has resulted in a higher salary, or has led to a management function within the organization. The fourth variable, career ambition, refers to the extent to which a person is explicitly motivated extrinsically and in making a career, instead of being more intrinsically motivated and interested in personal development. To measure this participants were asked to indicate the extent to which they attached and still attach great importance to highly economical working conditions such as having or finding a professional job, primary and secondary working conditions, career perspectives and promotion possibilities, or HRD facilities. The variable income (gross earnings per annum corrected for the size of the job) is measured in twenty blocks of 10.000 Dutch guilders (this equals with blocks of 4.538 Euro) each.

A linear regression analysis was conducted to test the proposed model. Additionally, in order to obtain a better view of the exact relationship between the variables also a path analysis will be conducted to test the model. The results of this last analysis are not presented here, but are to be discussed at the AHRD conference.

Data collection

The data on which the study is based comes from a study that is conducted for a national weekly magazine (with a readership of over 250,000 persons) with a large number of advertisements for jobs for higher educated employees. This study started in 1995 with a base-line measurement. It was repeated with a slightly changed questionnaire in 1996, which one in turn was further improved and repeated in 1998 (De Jong, Witziers, & Mulder, 1999). And the fourth measurement will be conducted in the end of the year 2000. The results presented in this paper are from the data that were collected in 1998.

Sample

The questionnaire is published in the magazine on December 10th, 1998. Apart from that 5,000 printed copies were sent by direct mail to a random selection from the readership. The number of respondents was 1,957. From the 5,000 questionnaires that were sent by direct mail, 1050 came back; from the magazine, the remaining 907 were returned. Although the response rate is relatively small, the total number of respondents is large enough to make a valid statement about HRD for higher educated employees, and the relationship between HRD and income.

For the readership mostly consists of higher educated employees with engineering, information technology, economics and financial backgrounds, one must take this into account with respect to the results of this study.

Results

Based on linear regression analysis results (see Table 1) show that the most important factors contributing to job level are level of initial education, number of years of work experience, economic sector of the organization and perceived career effect of the most important training program. More specifically, this implies that higher positions are held by university graduates, workers with more work experience, and workers in the profit sector. With respect to the participation in HRD activities four indicators have a significant relationship with job level. The negative relationship with the nature of the most important training program means that the higher job levels persons hold, the more they appear to participate in HRD activities focussed on specialization/updating instead of retraining. The negative relationship with the individual's goal of the most important training program means that the higher job levels persons hold, the less their HRD activities are focussed on personal development instead of on career development. Furthermore, the negative relationship between the perceived personal value of the most important training program and job level implies that the more this program has been perceived as supporting mostly personal needs, the less it could – and will – contribute to obtain or guarantees higher positions. Vice versa, the positive relationship with the perceived career effect of the most important training program means that workers who experienced substantial career developmental effect of their most important additional training program now indeed hold higher positions. Especially this last variable, the perceived career effect of the most important additional training program, has a relative substantial impact on job level. When all four indicators of HRD activities are considered, results show that they have a modest effect on job level; 5.5% of the variance in job level is explained by these HRD activities.

Table 1

Linear regression analysis on the exploratory model concerning the relationship between HRD activities and job level

Cluster	Model	R^2	Variable	Standardized Regression coefficient	T-value	Sign level*
Personal characteristics	1	.212	Number of years of work experience	.50	18.70	.000
Initial education	2	.223	Level of initial education	.13	4.89	.000
Work environment	3	.232	Economic sector of the organization	-.09	-3.56	.000
Participation in HRD	4	.287	Nature of most important training program	-.06	-2.50	.013
			Individual's goal of training program	-.11	-4.26	.001
			Perceived personal value of most important training program	-.07	-2.24	.025
			Perceived career effect of most important training program	.24	7.52	.000

* = Significant at the .05-level

$R^2 = 0.29$

The results concerning the income variable show that many variables included in the analysis have a significant relationship with income (see Table 2). More specifically, this implies that most of the variables having a clear relationship with the variable job level, also directly affect the variable income in the same way. In other words, controlled for job level, men have a higher income than female workers, university graduates earn more than vocational education graduates, workers in the profit sector earn more than workers in the non-profit sector. Additionally, workers in larger organizations and having more work experience earn more than workers in smaller organizations and workers having less work experience. Finally, two variables concerning the participation in HRD activities have a significant relationship with income. The positive relationship between the perceived career effect of the most important training program and income implies that respondents stating that they perceived some career effect of their most important training program earn more than respondents stating this was less the case. The positive relationship with the total time spent on short training programs taken per year means that the more people yearly participate in short training programs and the more time this all requires in terms of the number of working weeks a person is busy with such programs, the more these people will earn. But the impact of HRD activities is very small. Only 0.6% of the variance in income is explained by these HRD activities. As such, the main conclusion is that participation in HRD activities has an impact on respondents' income, but this impact is modest and must certainly not be exaggerated.

Table 2

Linear regression analysis on the exploratory model concerning the relationship between HRD activities and income

Cluster	Model	R^2	Variable	Standardized Regression coefficient	T-value	Sign level*
Personal characteristics	1	.358	Gender	-.17	-7.59	.000
			Number of years of work experience	.47	17.96	.000
Initial education	2	.422	Level of initial education	.22	8.73	.000
			Field of initial education	-.06	-2.20	.028
			Perceived quality of initial education	.09	3.77	.001
Career position	3	.522	Job level	.32	12.79	.000
Work environment		.561	Economic sector of the organization	-.19	-8.31	.000
			Size of the organization	.08	3.49	.001
Participation in HRD		.567	Total time spent on short training programs per year	.05	2.09	.037
			Perceived career effect of most important training program	.06	2.72	.007

* = Significant at the .05-level

$R^2 = 0.57$

Conclusion

The main conclusion of this paper is that most of the variables included in our model have a significant and positive relationship with job level and income. More specifically, gender, work experience, level of initial education and economic sector but also variables concerning the participation in HRD activities, such as the nature and goal of the most important training program, number of short training programs taken per year, and the perceived career effect of most important training program, have a significant relationship with either job level and/or income. Moreover, the direction of the relationships is in most cases in the expected direction. That is, our results are in line with either theoretical notions and/or results from previous research. So, to go back to our general research question, the answer is positive. Human Resource Development activities do affect future job level and income of higher educated professionals.

Moreover, as far as the dependent variable job level is concerned, the impact of HRD activities is modest. Apart from the personal characteristics respondents benefit most from participation in HRD activities for obtaining a higher position. More specifically, after work experience HRD activities explain most of the variance in job level. However, the impact of HRD activities on the dependent variable income is a different story. It is not that strong as we might expect. It must be noted that variables relating to participating in HRD activities, although some of these variables show a significant relationship, their impact on the dependent variable income is anyhow very modest. Certainly if the impact of HRD activities is seen in comparison to the impact of other variables such as gender, initial education, work experience and economic sector. These other variables explain far more of the variance in income. In other words, participants of HRD activities also benefit from their participation in terms of getting a higher income, but this effect must not be exaggerated. As such, these results are in line with other studies (Barron, Black & Loewenstein, 1989; Groot, 1994; Holzer, 1988; Mincer, 1989). The results of these studies also show that participating in HRD activities does contribute to a higher job level and /or a higher income.

Concerning the question why participating in HRD activities in fact only pays off in terms of individuals' job level and does not automatically result in a higher income, in our view the most important reason for this is straightforward. Participating in HRD activities, in general, is a very logical way to develop one's career, but it is eventually one's actual career position in terms of employability that guarantees a certain income. In fact our model is showing this. The model postulates that participation in HRD activities affect individuals' career position directly, and that the participation in HRD activities mainly affects income indirectly by promoting their career position. The fact that in a few occasions sec the participation in HRD activities already results in a higher income, must be attributed to the type of work and the role of HRD activities in such cases in our view. Certain jobs demand much HRD, because tasks are extremely function related and highly specialistic and/or knowlegde base is changing rapidly here. So, in these exceptional cases one could say that 'HRD is money'.

How should the results be interpreted practically? The question here is what can be said about the variance in job level and income that is explained by HRD activities. As the results show participating in HRD activities has a significant, but modest impact on individuals' job level and only a very small impact on their income. However, the variances in job level and income explained by HRD activities refer to overall results. So, one should recognize that for the individual's career development and raise in income HRD activities might have a considerable effect, especially when seen in time as it can intensify itself.

Finally, we have to point at the limitations of our study. Our study is limited with respect to the measurement of several variables, including the income variable and the measurement of participation in HRD. These deficiencies can mask the true effect of participating in HRD activities. Furthermore, our exploratory model postulates causality based on the theoretical notions regarding career development, but this has not been proven empirically within this study. To do this you need a longitudinal research design with cohorts. But in the sector of corporate training for higher educated employees research is in most cases confined to a more practical, comparative design like ours.

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The Relationship Between Training and Organizational Commitment in the Health Care Field

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This survey study examines the relationship between employee attitudes towards training received and feelings of organizational commitment among a sample of 337 registered nurses from five hospitals. Results show that perceived access to training, social support for training, motivation to learn, and perceived benefits of training are positively related to organizational commitment. The findings are discussed for their theoretical and practical application to HRD outcomes and for the management of HRD in health care settings.

Keywords: HRD Outcomes, Organizational Commitment, Health-Care

Despite the fact that the scope of training in industry is expanding (ASTD,1999), there remains concern over the contribution of training towards desired organizational outcomes. The expanded role of training places continued pressure on human resource development (HRD) professionals to develop more effective training methods, programs, instructional systems, and to conduct evaluations that demonstrates a return to the organizations from their training investments (Rush, 1996). This research study explores a potential new method of examining an outcome of training in organizations by exploring the possible relationship between training to organizational commitment. Organizational commitment is a term that refers to a person's type and strength of attachment to his or her organization (Arnold, Cooper & Robertson, 1998).

Problem Statement and Theoretical Framework

Training has been identified as an example of an HRM practice that contributes to gains in competitive advantage (Schuler & MacMillan, 1984) with some suggesting that contributions to productivity and organizational performance have become the most dominant argument for justifying training (Scott & Meyer, 1991). Yet, there remains a shortage of empirical support for the notion that HRD positively impacts organizational performance (Torraco, 1999). Given the challenges in measuring performance a more productive line of enquiry may be to examine relationships between training and desired workplace attitudes, which, in turn, have been found to positively relate to organizational effectiveness.

One of many work-related attitudes being examined for its relationship to the management of employee behavior is organizational commitment. In general terms, organizational commitment can be thought of as the level of attachment felt towards the organization in which one is employed. Early research considered organizational commitment as a uni-dimensional construct, however, it is now more widely acknowledged as being multi-dimensional (Meyer & Allen, 1997).

Meyer and Allen (1991) define the three constructs of organizational commitment as: "*Affective commitment* refers to the psychological attachment to the organization, *continuance commitment* refers to the costs associated with leaving the organization, and *normative commitment* refers to a perceived obligation to remain with the organization" (p.1). It should be noted that it is more appropriate to consider these to be components, rather than types, of commitment because an individual employee's relationship with an organization may vary across all three.

Much of the interest in organizational commitment stems from reports of positive consequences on employee behavior and work outcomes. Some HRD authors have suggested that training should be designed to achieve increased organizational commitment as an outcome (Lang, 1992). Higher levels of commitment were found to influence motivation for training, levels of participant knowledge following a training program (McEvoy, 1997), and the transfer of training process (Seyler, Holton, Bates, Burnett, & Carvalho, 1998). Previous research shows positive outcomes, such as reduced turnover, absenteeism, and extra-role performance resulting from increased levels of organizational commitment (Meyer & Allen, 1997). Therefore, the relationship employee

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perceptions regarding training provided by their employer and their level of organizational commitment is potentially valuable in exploring the outcomes of training.

The theoretical framework which guided this investigation, is centered on the employment relationship which is in-turn embedded in the context of social exchange theory (Blau, 1964). The terms and conditions of this reciprocal exchange between employee and their organization are defined in both formal written contracts and within in the psychological contract (Rousseau, 1989). Psychological contracts describe an individual's beliefs about their employment relationship and guide employee beliefs about what they think they are entitled to receive, or should receive, because of real or perceived promises from their employing organization (Robinson, Kraatz, & Rousseau, 1994). Human resource management (HRM) practices are acknowledged as affecting the psychological contract (Lucero & Allen, 1994). More recently, it has also been suggested that HRD managers have a role in defining and maintaining employees' psychological contracts (Sparrow, 1998). Training can be viewed as a management practice that can be managed to elicit a desired set of unwritten reciprocal attitudes and behaviors including organizational commitment. In return for demonstrations of these desired work-related behaviors many employees now view training as a "right of membership" (Scott & Meyer, 1991, p. 298) and as a benefit of employment. Therefore, training can be thought of as an HRD practice that influences workplace attitudes and behaviors.

Research Questions

The core question for this research was, to what degree are perceptions of training related to organizational commitment? More specifically, six research hypotheses were tested as the development of attitudes towards training are influenced by many other variables.

One of the key determinants of attitudes towards training results from participation. However, traditional measures of training participation have relied on measures of frequency (how many training events) and duration (period of time for training events). Perceived access to training was added as an alternative measure as this has been shown to correlate with actual participation (Tharenou, & Conroy, 1994).

> Hypothesis 1a. *The will be a positive relationship between participation in training measured by frequency and duration and organizational commitment.*
> Hypothesis 1b. *The will be a positive relationship between access to training and organizational commitment.*

Perceived support for training from colleagues, and support from senior staff influences the decision to participate in training and development activities (Noe & Wilk, 1993). The influence of social support from senior staff, supervisors as well as peers, colleagues, and fellow workers is considered important as social support may play a role in the frequency and duration of training experiences that an individual participates in as well as addition to developing attitudes about perceived access to training.

> Hypothesis 2a. *The will be a positive relationship between support for training from senior staff and organizational commitment.*
> Hypothesis 2b. *The will be a positive relationship between support for training from colleagues and organizational commitment.*

Among all of the personal and dispositional attitudes that affect participation in training, motivation to learn is frequently cited as being among the most important (Fleishman & Mumford, 1989). Training motivation can be thought of in general terms as a level of motivation towards participation in training and development activities. Training motivation has important implications for how employees perceive training related variables such as access, benefits, and support for training.

Hypothesis 3: Employees' with higher levels of training motivation will report higher levels of organizational commitment.

The perceived benefits of training have been found to impact participation and recall of past training. Nordhaug (1989) identified three different types of benefits that employees obtain from participation in training: personal, career, and job related benefits. Those who reflect positively on training benefits are thought to exhibit stronger feelings of organizational commitment towards the organization that provided the training.

Hypothesis 4. *The will be a positive relationship between perceived benefits of training and organizational commitment.*

The potential relationship between training and organization commitment is most likely moderated by other workplace attitudes. This study considered the role of job involvement, and job satisfaction as potential moderators.

Hypothesis 5. *The relationship between access to training and affective organizational commitment will be moderated by job involvement*
Hypothesis 6. *The relationship between access to training and affective organizational commitment will be moderated by job satisfaction.*

Methodology

Sample and Procedures

A self-administered written questionnaire was used to collect individual-level perception data on the relationship between training and organizational commitment. Even though perceptions of training practices may have limits, Schneider, Ashworth, Higgs, and Carr (1996) note that significant correlations exist between employee reports of the practices and procedures under which they work when compared to judgments made by external observers. This suggests that employees are an accurate gauge of HRD practices. The target population was registered nurses (RNs) employed in public hospitals. A sample of public hospitals was drawn from the Directory of Hospitals published by the Department of Public Health in a mid-western state. A stratified approach was used for selection to ensure variability in organizational size, and whether the hospitals served an urban or rural population as these variables may influence the amount of training provided.

Completed and useable surveys were collected from 337 registered nurses employed in five hospitals located throughout the state. Response rates ranged from 6% to 51% with follow-up research with hospital administrators confirming that the characteristics of respondents closely reflected the total employee population. As could be expected from a female-dominated profession, the majority of respondents were women (n = 319, 94.7%). Almost half (49.6%) of the respondents had completed at least a four-year college degree, have been a registered nurse for an average of 14.84 years and have been employed as a RN at their current place of work for an average of 10.52 years.

Measures

The variables under investigation were divided into three categories: training related variables, organizational commitment variables, and moderating variables. Training was viewed as the independent variable and was divided into six sub-variables. A three-item scale was developed to measure perceived access to training ($\alpha = .76$). Other study variables were selected from well-established and validated scales. These included four items to determine training participation based on frequency and duration of training events (Tharenou & Conroy, 1994), a shortened six-item form of the perceived support for training from colleagues scale ($\alpha = .83$), the 16-item perceived support from senior staff scale (Noe & Wilk, 1993, $\alpha = .96$), the 11-item motivation to learn scale (Noe & Schmitt, 1986, $\alpha = .87$); and the 14-item perceived benefits of training scale (Noe & Wilk, 1993, $\alpha = .82$). Organizational commitment was measured by the Affective, Continuance, and Normative Commitment Scales of Allen and Meyer (1990, $\alpha = .86, .79, .89$ respectively). The moderating variables were measured by the shortened form of the Lodahl and Kejner (1965) job involvement scale ($\alpha = .52$), and the three-item Michigan Organizational Assessment Questionnaire Sub-scale was used for job satisfaction (Cammann, Fichman, Jenkins, & Klesh, 1979, $\alpha = .85$).

The survey was developed and pilot tested in consultation with a small group of experts in both nursing and HRD. Item non-response was treated as missing data with analysis revealing no underlying pattern of missing responses. Data analysis employed bivariate correlations, and stepwise-multiple regression analysis for the six hypotheses. Factor analysis was used to confirm the suitability of the access to training scale.

Results

Means, standard deviations, bivariate correlations among the study variables are presented in Table 1.

Table 1
Correlations for all Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
TRF												
ACC	.10											
SSC	.03	.22*										
SSS	.04	.50**	.37*									
TMO	.12*	.07	.10	.15**								
TBP	-.01	.26**	.24**	.36**	.61**							
TBC	.01	.28**	.25**	.36**	.44**	.72**						
TBJ	-.10	.11	.12*	.17**	.06	.25**	.32**					
ACM	.05	.44**	.30**	.64**	.17**	.33**	.32**	.11				
CCM	.11	.06	-.04	.14*	-.05	-.08	-.19**	.09	.08			
NCM	.12*	.41**	.14**	.58**	.17**	.34**	.32**	.16**	.72**	.21**		
JBI	.11	.22**	.04	.28**	.24**	.28**	.26**	.12*	.39**	.14*	.41**	
JST	.07	.43**	.35**	.56**	.11*	.30**	.33**	.09	.68**	.05	.62**	.29**

Key: *p <.05, **p < .01; Variables: TRF = Training Frequency, ACC = Access to Training, SSC = Social Support for Training from Colleagues, SSS = Support for Training from Senior Staff , TMO = Training Motivation, TBP = Personal Related Benefits of Training, TBC = Career Related Benefits of Training, TBJ = Job Related Benefits of Training, ACM = Affective Commitment, CCM = Continuance Commitment, NCM = Normative Commitment, JBI = Job Involvement, JST = Job Satisfaction, .

Training participation based on duration was found to be significantly and positively related to affective commitment (p < .01, r = .15) and significantly but negatively related to continuance commitment (p < .05, r = -.11). Training frequency (number of training events) was significant only with affective commitment providing partial supports hypothesis 1a. Perceived access to training shows a stronger relationship with affective commitment at the p < .01 level (r = .44) and with normative commitment (r = .41) supporting the hypothesis 1b. The relationship between support for training from senior staff and organizational commitment was significantly related to all three forms of commitment supporting hypothesis 2a. The relationship between support for training from colleagues was significantly related to both affective and normative commitment supporting hypothesis 2b.

Results show a significant positive relationship between motivation to learn and organizational commitment among the affective and normative forms of commitment, which partially supports hypothesis 3. The relationship between career related benefits of training was significant with all three forms of commitment, personal benefits to both affective and normative commitment, and job related benefits of training to normative commitment. This provides partial support for hypothesis 4.

As discussed above, the relationship with participation in training and organizational commitment was most significant with access to training. Therefore, duration and frequency of training were dropped from all further analysis. A regression analysis using access to training to predict organizational commitment when moderating for job involvement was found to be insignificant providing no support for hypothesis 5. However, hypothesis 6 was supported and significant (p < 0.01) for affective commitment with 51.7% of the variance explained. These results are presented in Table 2. This suggests that, when controlling for organizational size and moderating for job satisfaction, those who feel that they have higher levels of access to training are more likely to exhibit higher feelings of affective commitment. Whereas, those low in job satisfaction and those low access to training also feel lower levels of affective commitment.

Table 2

Stepwise Regression Analyses for Main and Moderating Effects: Access to Training and Organizational Commitment Moderated by Job Satisfaction

Variable	Affective Commitment		Continuance Commitment		Normative Commitment	
Access to Training	-.22	-0.34	.03	.04	-.09	-.13
	(.01)*		(.15)		(.12)	
Organizational Size	-.23	-.02	-.02	-.01	-.51	-.19
	(.10)**		(.15)		(.12)***	
Job Satisfaction	.19	.26	.08	.07	. 25	.31
	(.08)**		(.12)		(.09)***	
Interaction Term	.06	.74	.02	.02	.04	.45
	(.02)***		(.03)		(.02)**	
R^2	0.52		0.01		0.45	
F	83.51***		.42		63.96***	
Df	316		321		318	

***p < .01 **p < .05 *p < .10. Numbers in parentheses = standard error

Overall, findings indicate that significant relationships exist between organizational commitment and hours spent in training, access to training, motivation to learn, support for training from colleagues and senior staff, and perceived benefits of training. The affective form of organizational commitment shows the most consistent relationships with these variables. Job satisfaction, but not job involvement moderate the relationship between access to training and affective commitment.

Conclusions And Recommendations

The difficulty in evaluating training programs has prompted researchers to explore work-related variables as surrogate measures for evaluating HRD activities. The application of organizational commitment as an outcome of training allows training to be measured at multiple levels while also addressing the call to analyze individual change following training over a long period of time.

The following conclusions can be made based upon the analysis of all data in this study. First organizational commitment is related to participation in training. However, perceived access to training appears to result in a stronger relationship than either the number of training events attended or the number of hours spent in training during the past year. Second, organizational commitment is related to training related issues that measure the perceived support for training from senior staff and colleagues, personal motivation to learn, and the perceived benefits of training. The strongest relationships are with the emotional or affective form of organizational commitment. Finally, the affective component of organizational commitment is related to access to training when the moderating influence of job satisfaction is controlled for.

The findings of this study have numerous implications for those employed in management and administrative positions within the health-care field and for HRD practitioners. This study has shown that training can play a role in the development and maintenance of organizational commitment. This should encourage managers to further explore the role of commitment and its relationship to improvements in retention and productivity. While organizational commitment is a diverse construct with a large body of theoretical and empirical literature, HRD managers can focus on a few key elements. First, it appears that affective commitment is the most important to foster within organizations. Second, HRD practitioners should focus on the job related antecedents to commitment rather than personal or situational characteristics over which they have little control. Adapting the summary of relevant job-related and organizational antecedents of high levels of affective commitment from Pinks (1992) HRD managers could play a role in increasing job challenge, role clarity, participation in decision making about training, and communicating that the organization depends on the continued efforts of each employee. Finally, HRD professionals can capitalize on the existing empirical work on commitment to demonstrate to organizational decision-makers that training contributes to commitment, which in turn relates to desired work place attitudes and behaviors such as reduced absenteeism and turnover.

Future research should seek to further explore the use of organizational commitment and other work-related variables as potential outcomes for HRD. This type of research would be well suited to longitudinal studies employing both quantitative and qualitative methodologies. Ideally studies would involve larger samples and involve a wide range of organizations in both private industry and public agencies. It is with such efforts that HRD can develop into a major force in the continued search for a greater understanding of the role of developing human resources for achieving organizational success.

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The Role of HRD in Promoting Job Satisfaction in Malaysian SMEs

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Malaysia has emerged as a major economic force in the Asia-Pacific region. While the recent growth is supported in part by government initiatives, much credit can be attributed to the development of small-medium enterprises (SMEs). Recent U.S. studies have found evidence of extensive HRD in SMEs, and other recent studies found higher levels of job satisfaction among employees of small firms. This study measured the nature and extent of HRD; the level of job satisfaction among workers; and determined the correlation between workplace learning and job satisfaction in Malaysian SMEs.

Keywords: Workplace Learning; Job Satisfaction; Small Business

Malaysia is a resource rich country and a major socio-economic force in the Asia-Pacific region. Historically, the economy of Malaysia was based on agriculture and natural resources. Over the past 25 years, the pace of development of the Malaysian economy has been rapid. Throughout the 1980s and early 90s, the economy grew at an average annual rate of 7.8 per cent. Strong growth in public investment and exports during this period stimulated domestic demand and contributed to a consistent rise in income and employment. But the Asian economic recession of the late 1990s and the severe worsening of Malaysia's external terms of trade led to a general slow-down in the growth performance. Various adjustment measures were used by the Government to restore balance and stability. The economy now appears to be emerging from the recession and recording GDP growth rates around 4 per cent per annum (Lucas & Verry, 1999).

Wan (1994) reports that until these relatively recent undertakings "enterprise training in Malaysia received little attention from policy makers. Even now not much is known about it, despite the fact it is one of the most important sources of job-specific skill development" (p. 58). In fact, Chalkley (1991) reports that the realization of the importance of training is a recent concept in Asia. The companies tackling such problems represent the exception rather than the norm. On average, companies in Malaysia and Indonesia undertake more training days than their counterparts in Singapore and Hong Kong, but spend less. This is because management training receives greater emphasis in Hong Kong, South Korea, and Singapore, while in Malaysia there is a greater emphasis on skills training, which is generally cheaper to organize. The estimates are that Malaysia spends an average of US$200 on training per employee per year.

By comparison, British firms invest approximately US$5,000 annually per employee and Germany invests an average of US$7,500 annually per employee. U. S. firms invest, on average, US$1,800 per year per employee in training and development, or by another estimate a total of US$60.7 billion a year. Furthermore, estimates suggest that about 8 percent of new employees receive formal training in their first year of employment in U. S. firms and 20 percent of new employees receive such training in European firms, and 74 percent receive such training in Japanese firms (Hitt, 1998; Training Industry Report, 1998).

Developing the human resources of a company would seem to be key to increasing production and closing the gap between the level of worker skill and present and future needs. Businesses that have made training, education, and development a priority have seen it pay off through greater profitability and increased worker job satisfaction (Coblentz, 1988; Filipczak, 1989). Recent studies have found that job satisfaction is rarely tied to pay and promotion; but rather, workers are more interested in such things as feeling appreciated, being "in on things," and career development (Buhler, 1994; Dolan, 1996) all of which have linkages to workplace learning.

Job satisfaction is simply how people feel about their jobs and different aspects of their jobs. There are important reasons why organizations should be concerned with job satisfaction, which can be classified according to the focus on the employee or the organization. First, the humanitarian perspective is that people deserve to be treated fairly and with respect. Job satisfaction is to some extent a reflection of good treatment. It also can be

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considered an indicator of emotional well being or psychological health (Haccoun & Jeanrie, 1995). Second, the utilitarian perspective is that job satisfaction can lead to behavior by employees that affects organizational functioning, as well as a reflection on organizational functioning. Differences among organizational units in job satisfaction can be diagnostic of potential trouble spots (Beatty, 1996). Each reason is sufficient to justify concern with job satisfaction. Combined they explain and justify the attention that is paid to this important variable.

However, until recently, most studies like the ones by Coblentz (1988), Beatty (1996), and Hitt (1998), for example, have been conducted in large corporations. Few firms in the samples have had annual sales of less than US$1 billion. Most U.S. businesses are small to mid-sized with annual sales well under US$10 million (Lee, 1991). No exact figures are available on the nature and extent of small businesses in Malaysia, but it is clear that they constitute a substantial part of the overall economy (Chalkley, 1991). The figures in 1995 indicate that they accounted for 84 percent of the total *manufacturing* establishments. In the same year, their contributions to total *manufacturing* output and employment amounted to 15 percent and 18 percent, respectively (Hashim, 1999).

To date, little is known about the relationship between workplace learning and employee satisfaction in small to mid-sized companies. Studies by Des Reis (1993) and Rowden (1995) have found that such firms may not even be aware of the nature and extent of learning in their workplaces. Yet it is likely that the success of such companies is at least attributable to the ways in which employees are attended to, formally and informally trained, and developed.

Statement of the Problem

Conventional wisdom says that small businesses do not have the financial resources nor the time to do very much, if any, training and development or workplace learning. These views on training in small businesses have generally been supported each time quantitative research has been conducted in a variety of small businesses. However, a recent qualitative study (Rowden, 1995) found that, in fact, U.S. small businesses do engage in a considerable range of formal, informal, and incidental workplace learning activities. The information gleaned from the interviews, observations, and documents provide a new foundation upon which questionnaires can be developed that can assess the extent of workplace learning from a perspective that small businesses truly understand.

Another recent study (Anonymous, 1997) found that workers in U.S. small businesses were generally more satisfied with their employment situation than were workers in larger companies. The study found that 44 percent of the workers in small businesses said they were "extremely satisfied" with their jobs, compared with 28 percent at companies with 1,000 or more workers. It was speculated that factors such as job security, empowerment, and the ability to do what they do best might explain job satisfaction. While workplace learning was not one of the indicators in the study, the respondents reported that they could learn and grow on the job.

An assumption of this study is that a sense of satisfaction a person feels about his or her employment can be directly linked to workplace learning. That is, employees who have opportunities to grow and learn in their job will express higher levels of job satisfaction. To test this assumption, this study first established the nature and extent of workplace learning in small to mid-sized businesses; established the level of job satisfaction reported in the same small to mid-sized businesses; and established the relationship between these learning opportunities and the level of employee satisfaction in these organizations.

Purpose and Research Questions

The overall purpose of this study is to understand workplace learning in the Malaysian context. The specific research questions are:

1. What is the nature and extent of workplace learning in small to mid-sized Malaysian businesses?
2. What is the relationship among three types of workplace learning (formal, informal, and incidental) in the Malaysian context?
3. To what extent do those three types of workplace learning explain job satisfaction?

Methodology

A survey research design was deemed the most appropriate way to understand the relationship between workplace learning and employee job satisfaction. A survey instrument was developed that captures the essence of the findings on workplace learning revealed by the Rowden (1995) study combined with the Spector Job Satisfaction Survey (1997).

Description of the Sample

Five Malaysian companies agreed to participate in the study. Potential companies were identified through contact with the local university. Students from the HRD program at the university administered the surveys at the companies. A total of 228 surveys were returned. The five companies consisted of a manufacturing firm, two financial services firms, an educational/training company, and a non-government organization (NGO). The manufacturing firm has been in business for 11 years, employs 54 people, and has gross annual revenues of RM 3, 000,000 (RM [ringgitt] 3.8=$1 USD at the time of this writing). The financial services companies have been in business for around 10 years, employ a combined 150 people, and produce annual gross revenues of RM 360,000,000. The training company has been in business for eight years, employs 100 people, and has gross revenues of RM 3,000,000. The NGO has been in business for 12 years, employs 124 people, and while it does not generate revenue it has an annual budget of RM 2,000,000.

All the respondents worked full time. Fifty two percent were female. Eighty seven percent were between the ages of 21 and 44. Sixty percent were married. Thirty eight percent worked at companies with fewer than 100 employees and 59 percent worked for companies that employed between 100 and 200. Eighty six percent have been employed by their current company for less than 10 years. Sixty five percent are non-supervisory and 69 percent earned between RM $1000 and RM $3000 per month. Seventy four percent worked in service industries while 26 percent worked in manufacturing.

Instrument

There is limited research on HRD in small to mid-sized businesses. Most people believe that small businesses do little, if any, development of their workers. For example, *Training Magazine*, which annually conducts a study of the training industry in the U.S. annually, does not even attempt to contact businesses with fewer than 100 employees and only 16 percent of their sample consist of companies with between 100 and 500 workers. Even the Malaysian HRDA ignores manufacturing firms with fewer than 50 employees.

Several attempts have been made to determine the nature and extent of workplace learning in small business. Invariably, the studies concluded that, in fact, little HRD occurs in small businesses (for example, Des Reis, 1993; Hill & Stewart, 1999). A review of several of the studies determined that a likely cause of the lack of discovery of workplace learning in small businesses was due to the design of the surveys. A qualitative study by Rowden (1995) did reveal numerous indices of workplace learning in small to mid-sized businesses in the U.S. By looking at the field notes and transcripts of interviews of workers, it was believed that previous attempts to capture workplace learning in small to mid-sized businesses was due in large part by the language of the questionnaire. Making every attempt to stay as close as possible to the language and references used by actual workers in small to mid-sized businesses, a survey was developed to attempt to capture the nature and extent of workplace learning in these businesses.

The research on job satisfaction in small businesses mirrors that of HRD in small businesses. Until a recent study (Anonymous, 1997) little attention had been paid to worker job satisfaction in small businesses. This study found that workers in small businesses, generally, were more satisfied with their work than were workers in larger businesses. The study did not, however, seek to determine *why* the workers were more satisfied. The study mentioned ideas like better communication, a feeling of being in on things, and a smaller power distance—but no factors were actually measured. Again based on the Rowden (1995) study, a possible connection could be made between workplace learning and job satisfaction. To determine if this hypothesis were true, workplace learning and job satisfaction would have to be measured in the *same* small businesses. Then, correlational measures could be made to determine if small to mid-sized businesses with high measures of workplace learning *also* had high measures of job satisfaction. The Spector (1997) Job Satisfaction Survey was determined to be the best-validated and reliable instrument for determining job satisfaction. A modified version was incorporated into the questionnaire along with request for background data.

Once developed, the instrument was subjected to critique sessions by area experts and graduate HRD classes to ensure for content validity. The process was continued until saturation was reached; that is, until no more distinct categories could be ascertained. The Malaysian version required some modification for cultural differences. For example, religious education had to be added since this is often provided for by Muslim employers and the "married—not married" question had to be expanded to cover all possibilities since feedback indicated "not married" sounded too much like a "*curse*" to them.

The results of the development process was a six page self-administered questionnaire. The instrument is divided into three sections—workplace learning, job satisfaction, and background information. The three constructs or dependent variables for the workplace learning portion were formal, informal, and incidental learning. The reliability for each measure was conducted using Chronbach's alpha. The *formal* learning scale (10 items, alpha = .83) included items measuring respondent's perceptions of planned, organized, training activities. The informal learning scale (8 items, alpha = .73) included items measuring respondent's perceptions of unplanned or spontaneous activities that lead to perceived learning on the job. The *incidental* learning scale (6 items, alpha = .65) included items designed to measure respondents perception of normal workplace activities that resulted in learning even though that was not the purpose of the activity.

Table 1. **Results of Exploratory Factor Analysis of Job Satisfaction Items**

Item	**Loading**
FACTOR I: *Alienation From Work*	
*I do not feel that the work I do is appreciated	.71
*I feel unappreciated by the organization when I think	.71
*I often feel that I do not know what is going on with the organization	.66
*I sometimes feel my job is meaningless	.62
*The goals of this organization are not clear to me	.61
*My supervisor shows too little interest in the feelings of subordinates	.57
My efforts to do a good job are seldom blocked by red tape	.55
*My supervisor is unfair to me	.53
*I am not satisfied with the benefits I receive	.51
*I don't feel my efforts are rewarded the way they should be	.50
FACTOR II: *Compensation*	
The benefits we receive are as good as most other organizations offer	.77
I feel I am being paid a fair amount for the work I do	.75
I feel satisfied with my chances for salary increases	.71
The benefits package we have is equitable	.69
I am satisfied with my chances for promotion	.65
When I do a good job, I receive the recognition for it that I should receive	.63
Those who do well on the job stand a fair chance of being promoted	.51
FACTOR III: *Enjoyment*	
I enjoy my coworkers	.73
I like my supervisor	.67
My job is enjoyable	.63
I like the people I work with	.60
I feel a sense of pride in doing my job	.56
I like doing the things I do at work	.56

* reverse-scored item

The Spector Job Satisfaction Survey was embedded into the instrument. The 36 items were designed to measure nine separate aspects of job satisfaction. However, after the data collected were subjected to preliminary analysis, it was found that none of the nine measures yielded adequate reliability. This may have been because the JSS was developed in the United States and some items may carry different meanings in other cultures, or it could simply be an artifact of too few indicators per construct being measured. Consequently, it was decided to subject those 36 items to exploratory factor analysis to determine the underlying constructs that constituted those nine measures. During this process, numerous solutions both octagonal and oblique were explored ranging from two through eight factor solutions. The ultimate criteria were conceptual meaningfulness. Table 1 shows the results of the exploratory factor analysis.

As a result of the exploratory factor analysis of job satisfaction, the dependent variables were identified as alienation from work, compensation, and enjoyment. The items comprising each of these factors were combined into additive indices and the reliabilities were calculated. *Alienation From Work* (10 items, Chronbach's alpha = .84) included items measuring being appreciated, feeling "in" on things, and satisfaction with the quality of supervision. *Compensation* (7 items, Chronbach's alpha = .83) included items measuring feelings about pay, benefits, and promotion. *Enjoyment* (6 items, Chronbach's alpha = .75) measured if the respondent liked his or her work, supervisor, and coworkers. The *overall* measure of job satisfaction received an alpha of .81. Table 2 contains the distribution and reliabilities of the key measures.

Table 2. Distribution and Reliabilities of Key Measures

Measures	Mean	S.D.	Min	Max	Coefficient Alpha
Formal Learning	28.74	8.66	8	48	.83
Informal Learning	24.34	5.26	10	36	.73
Incidental Learning	21.83	3.75	11	30	.65
Alienation	34.70	8.88	10	58	.84
Compensation	21.51	5.89	6	32	.83
Enjoyment	26.96	4.34	14	36	.75
Overall Job Sat.	129.48	15.86	74	175	.81

The third section of the instrument contains nine ordinal and nominal scale items designed to capture additional information about the respondents. These items were also subjected to analysis with some minor correlations noted. However, they were not germane to the study and are not reported here.

Table 3. Workplace Learning Responses (N=214, may vary slightly due to missing responses)

	Mean	Std Deviation	% Responding 5 or 6 (top of Agree Scale)
Incidental			
What I learn about my job happens as a natural consequence of doing things and keeping busy	4.27	1.34	51.2
When I make a mistake, my boss or a co-worker helps me to identify what to do to avoid doing it again	4.36	1.17	49.8
I am encouraged to share my experiences with my co-workers	4.78	1.10	65.6
I often find time to review or reflect on my experiences	4.18	1.09	41.5
From time to time, I have the opportunity to work closely with co-workers with different skills	4.26	1.09	45.1
We have regularly scheduled or periodic meetings where we are encouraged to express our opinions	4.23	1.34	46.8
Informal			
I have the information that I need to do a good job	4.60	1.12	59.9
When I came to work here, or am transferred to another job, they have me work with someone who shows me how things work at this company	3.79	1.47	35.4
Managers feel that helping us learn how to do our job better is one of their important responsibilities	4.38	1.20	54.4
I have an opportunity for cross-training, or to learn skills from others in my department or office	3.83	1.38	39.3
The company supports me in professional associations related to my work	3.59	1.53	30.0
If a hazardous or dangerous situation is noticed, our supervisor will call us together to discuss it	4.10	1.35	43.7
Formal			
The company pays all or part of the costs of job-related courses at a local university, college, or voc-tech school	3.05	1.80	26.7
The company pays all or part of the cost of job-related courses in house, at the local training center, or hotel	3.94	1.75	45.3
When the company buys a new piece of equipment they have someone come out and show us how to use it	4.03	1.52	48.8
I sometimes attend professional conferences related to my job or profession	3.61	1.64	34.9
My company makes training funds available if I can demonstrate need or it is felt it will help me perform my job better	3.60	1.56	32.2
We have regularly scheduled meetings for training on the occupational safety and health	3.17	1.53	23.1
The company provides support if I want to further my formal education	3.48	1.62	29.2
There is support from top management for training activities	4.04	1.35	40.3

Data Analysis

The data were analyzed in a variety of ways. First, simple descriptive statistics (means; measures of variation—standard deviations; frequencies) were employed for the surveys from each company to determine the nature and extent of workplace learning in the companies. Then, the Pearson product-moment correlation was conducted to determine the intercorrelation among the three types of learning, and to determine the strength of the relationship between workplace learning and employee satisfaction across the companies.

In order to assess the relationship among the three types of workplace learning, two different analyses were conducted. In the first analysis, the mean-item mean for each of the three was calculated and compared so that the relative extent of each can be compared. The intercorrelation among the three was examined. They were different but related, which is what one would expect.

In order to answer research question 3, the correlation between the three-workplace learning measures and the four (3 + overall) job satisfaction measures were examined. Additional analyses examined the relationship between background variables and measures of job satisfaction and workplace learning.

Findings

Examination of the responses on the workplace learning portion of the instrument revealed sufficient evidence to conclude that learning is pervasive in these SMEs. Table 3 shows the means, standard deviations, and percent responding at the top of the "Agree Scale." The means and standard deviations indicate strong positive responses to the questions in all three arenas of learning. Findings support the notion that small businesses have a substantial amount of human resource development occurring in the workplace. In fact, the only questions that received somewhat low ratings dealt with whether or not the organizations reimbursed tuition for formal education and professional organizations. All other questions dealing with formal, informal, and incidental learning received strong support from the respondents.

The three measures formal, informal, and incidental learning were examined for the mean item effect. The mean-item means are: *informal* = 4.06; *incidental* = 4.37; *formal* = 3.59. Incidental learning has a greater place in the workplace by these numbers, followed closely by informal learning. Table 4 shows the intercorrelation among the three-workplace learning variables which is further evidence of validity. These measures provide further understanding of the nature and extent of HRD in Malaysian SMEs.

Table 4. Intercorrelation Among Three Types of Learning

		Incidental	Informal	Formal
Incidental	Pearson r	1.000	.683**	.519**
Informal	Pearson r		1.000	.698**
Formal	Pearson r			1.000

**. Correlation is significant at the 0.01 level (2-tailed)

Table 5 shows the relationship between workplace learning and job satisfaction. All three measures of workplace learning were significantly correlated with each of the four measures of job satisfaction.

Certain background variables exhibited weak but significant correlations with the three forms of workplace learning, and the four variables of job satisfaction. They were not included as part of this discussion.

These findings have a profound bearing on our understanding of workplace learning in small businesses. It also establishes strong linkages between workplace learning and job satisfaction in these same Malaysian small businesses. The summary of the relationships contained in Table 5 are key to this new understanding.

The coefficient of determination of the three types of learning as they relate to overall job satisfaction, allow us to predict that 24 percent of the overall job satisfaction these workers experienced is accounted for by Informal learning; that 17 percent is accounted for by Incidental learning; and that 17 percent of the variance is accounted for by Formal learning. While this acknowledges that other factors effect job satisfaction, no other known study has so directly tied a satisfied workforce to the learning that occurs within the work setting.

Table 5. Relationship Between Workplace Learning Measures and Job Satisfaction Measures

		Incidental	Informal	Formal
Alienation	r =	-.256**	-.201**	-.169*
	r^2 =	.07	.04	.03
Compensation	r =	.456**	.554**	.571**
	r^2 =	.21	.31	.33
Enjoyment	r =	.382**	.431**	.277**
	r^2 =	.15	.19	.08
Overall Job Sat	r =	.408**	.490**	.412**
	r^2 =	.17	.24	.17

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

This study also indicates that workplace learning has linkages to an employee's satisfaction with his or her perception of *compensation*. The coefficient of determination allow us to predict that 21 percent of the satisfaction with compensation is accounted for by Incidental learning; that 31 percent is accounted for by Informal learning; and 33 percent is accounted for by formal learning. This supports the belief that workplace learning positions one for advancements that lead to pay increases and recognition.

The mean-item means analysis indicates that of the three measures of workplace learning, incidental learning has the greater place among them. Again, this has significance as to where we place our time and money. Formal learning—the one that gets all the attention and money—has the lowest place of the three.

Conclusion and Discussion

Previously, conventional wisdom has held that SMEs in Malaysia, as well as most of the rest of the world, do little to develop the human resources in their organizations. This study does not support that thinking. The respondents in this study reported extensive incidents of formal, informal, and incidental learning in the workplace, with incidental learning having the greater place among them. In addition, the respondents also reported a feeling of overall job satisfaction with compensation, work enjoyment, and not feeling alienated a big part of their perception of satisfaction. Not only that, they attributed a large part of their job satisfaction to the availability of learning opportunities on the job.

These findings have some significant implications for theory and practice:

- No longer can there be denial that the development of human resources occurs in small businesses. Studies such as the ones by Des Reis (1993), Morse (1984), and *Training* (1998) that found an absence of HRD activities were conducted in the U.S., but indications are that this studies findings will hold up in other countries.
- There is now support for the findings made by Anonymous (1997) in U. S. small businesses that found workers generally had a higher level of job satisfaction than did workers in large enterprises.
- Workplace learning is now directly linked to employee job satisfaction. No known previous studies have undertaking the connection between the two variables. This can have huge implication as to where managers place their emphasis to ensure content workers.
- Informal learning has a significantly higher place in the learning network than does formal training. Incidental learning has an equal place as does formal learning. As Jacobs and Jones (1995), and Rothwell and Kazanas (1994) encourage, greater emphasis and financial support needs to be placed on on-the-job training as a learning tool in organizations.
- This study supports previous findings (Kovach, 1987) that being appreciated for one's work, feeling "in" on things, and enjoying the workplace and coworkers are a significant part of job satisfaction.

While this study clearly does not represent the entire global workplace, even so, these findings are significant for exploring the relationship between workplace learning and employee job satisfaction. It is the first known empirical study to establish the nature and extent of workplace learning in small businesses. It is also the first study to delineate the relationship between workplace learning and job satisfaction. A number of practical implications can be drawn that are of interest to HRD and managers in companies, small and large, in day-to-day operations. Additionally, it also establishes a new understanding for teachers of human resource development.

human resource management, and management. This material provides techniques to promote operational methods to help assure organizational success.

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A Theory of Consultancy

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Professionals are increasingly finding themselves in the consultants' role. The advice available to them from consultancy "experts" is frequently anecdotal. This paper presents an emerging theory of consultancy based on the analysis of thousands of videotaped consultations. The theory contains six units: structure, relationship, attitude, experience, language, and technical. The empirical evidence and theoretical foundations of all six are described, together with how they interact. Implications for HRD are offered.

Keywords: Consulting, Consultants, Theory-Building

Consultancy and definitions

Consultancy is an increasingly significant activity within organizations. For example, HRD trainers' roles are changing with greater emphasis being placed on consultancy in organization change, organization design, individual and career development, and performance improvement (McLagan, 1996).

Despite numerous published articles, a steady flow of conference presentations, and several useful books (e.g. Block, 1981; Schein, 1999) on consulting, the basis for these publications seems to be the personal experiences and impressions of the authors. Although the insights gleaned from practicing consultants can be valuable, the very nature of the observations on which such insights are based is unsystematic and subject to selective attention and selective memory. Thus, they fail to meet the criteria for an empirically based theory.

In this paper, we propose a systematic approach to consulting based on analyses of over two thousand videotaped consultations of novice to very experienced (defined as over 20 years of consulting practice) consultants in the areas of HRD, HRM, statistics, psychology, economics, information technology, and instructional technology. The theory described here is a refinement of ideas presented at a conference seven years ago (Boroto, 1992). The components of the theory are grounded in empirical and theoretical work in personality and social psychology, psychotherapy, and communications. We have demonstrated that the observations within the theory can be reliably made (r's from .85 to .96, for multiple populations with sample sizes greater than 40). Components of the theory have been field tested over the past 20 years in graduate level consultancy skills classes and with practicing consultants.

This theory differs from the work of Block (1981) and Schein (1999) both in focus and in substance. For example, both Block and Schein focus on practical suggestions from their personal experiences from which theory can be inferred. We articulate a theory based on theoretical and empirical work with specific application principles from which a broad range of consulting applications can be inferred. Block defines a consultation as a conversation to change or improve a situation where one has no direct power. Schein defines a consultation as a form of helping relationship. We define a consultation as any conversation with a purpose and intended result. Block focuses on gaining leverage. Schein focuses on skillfully moving between the helping roles of *expert*, *doctor*, and *process consultant*. We focus on creating a situation to enhance a client's informed choices.

This paper will follow the structure of Torraco's (1999) paper on a theory of knowledge management. Four definitions are central to what follows:

- *Consultancy* is any conversation with a purpose and intended result. The power of this definition is its simplicity, its functionality, and its specificity. This definition provides consultants with a place to go when they get lost during a consultancy. They simply ask, "What is my purpose and intended result?";

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- A *client* is someone who invites a consultant to participate in a conversation with a purpose and intended result;
- A *consultant* is a person who agrees to participate in a conversation with a purpose and intended result. Note: the specific roles the client or the consultant assumes within the consultation are defined in what we will later describe as the "wanted and needed conversations" and the "willing and able conversations." Negotiating roles based on wants, needs, willingness, and ability enhances flexibility of role definitions and provides a greater breadth of creative questions and solutions; and
- An *effective consultation* is one where the wants and needs of the client were identified and the consultant was willing and able to address the client's wants and needs with an implementable plan; the plan was implemented; and results of the implementation stand up to external scrutiny.

Theoretical base

A consultation is a complex, multidimensional interaction. There exists the relationship between the consultant and the client, the structure of the process they work through, the attitudes of each participant, the effects of the language they use, the effects of their experiences during the consultancy, and the technical issues they work through. Those units draw from the following disciplines that provide the basis of this paper - human communication, psychology (mainly, personality theory and social psychology) and psychotherapy, and epistemology. These are briefly summarized here.

Human communication theory. Communication theory emerged from the academic disciplines of social psychology, sociology, and anthropology, and originated from four lines of inquiry: the study of rhetoric and public address; propaganda and media effects; transmission and reception of information; and group dynamics and interpersonal attribution and interaction (Heath & Bryant, 1992).

Of the individual theories under the umbrella term "communication," two are of particular relevance to consultancy. The first is action-oriented language theory with its concentration on performance (Austin, 1962), where meaning is viewed as inseparable from intention, and the key to successful communication is the sender's ability to communicate his or her intentions. The second is communication systems (Fisher, 1982), which incorporates systems and communication theories to view relationships as complex, interdependent, dynamic, self-adjusting, and goal-oriented, and where each person is viewed as a communication system as well as part of many other systems, and communication events transpire in the context of each system (Heath & Bryant, 1992).

Psychology and psychotherapy. The theoretical units of consultancy draw from four psychological theories: social penetration theory, which describes the process whereby people come to know one another in varying degrees of detail and intimacy (Altman & Taylor, 1973); social exchange theory, which postulates how people negotiate the rules and requirements of each relationship (Roloff, 1987); social learning theory, which considers the interaction between people and the environment and views behavior as being directed towards goals and outcomes projected into the future (Rotter, 1954); and self-determination theory (Deci & Ryan, 1980). The units also draw on psychotherapy, and in particular the relationship between the therapist (consultant) and client (Rogers, 1967; Horvath & Luborsky, 1993).

Epistemology. Although the academic discipline of epistemology is a formal branch of philosophy that addresses the methods, limits, and extent of human knowledge (Webster, 1988), individuals develop personal epistemologies or "world views" that manifest themselves in beliefs, attitudes, and selective attention and perception. The formal epistemology that we draw from is based on such constructivists as Kelley (1955) and Maturana (1976). From a constructivist perspective, consultancy occurs in a context of human social interactions, which constitute and are constituted by communication. These interactions produce and reproduce the social structures and actions people know as reality (Berger & Luckmann, 1966). Both parties in a consultation are dynamic interpretive processors who form impressions of the other. Their "epistemologies" can be operationalized by studying the number and quality of the consultant's and client's constructs (Kelley, 1955). Those impressions and constructs influence the attitudes and experiences of both parties, as highlighted by the individuality and commonality corollaries of Kelley's theory. In addition, the process of ascribing or attributing meaning to an experience or event occurs through the process of making distinctions that provide the essence of both language and theory (Efran, Lucans, & Lucans, 1990; Maturana, 1976).

The Need for a Theory of Consultancy

Campbell (1990) described seven roles of theory based on a synthesis of the assertions of Dubin, Cronbach, Landy, Vasey, and Whetten. These can be used to justify the need for a specific theory, in this case of consultancy. Space limitations have meant that all seven cannot be addressed in this paper; three are:

Defining applied problems. Theory provides a means for identifying and defining applied problems. Breakdowns occur in consultancy, and a theory allows the consultant to analyze those breakdowns by identifying sources of potential problems. At a macro-level, theory advances the effectiveness and reliability of consultations and informs the education and development of consultants; and at an individual level, theory allows consultants to analyze their personal performance and development needs.

Evaluating solutions. Theory provides a means for prescribing or evaluating solutions to applied problems. A theory of consultancy would not only identify consultancy problems but also offer solutions, a means of evaluating those solutions, and strategies for systematically improving practice. To a consultant, that may mean anticipating issues likely to arise in a forthcoming consultancy and planning for them, or it may mean with hindsight analyzing a past consultancy episode and using the theory to identify and evaluate solutions to any problems experienced.

Interpreting future research. Theory provides a means by which new research data can be interpreted and coded for future use. As the number of consultants rises and the amounts spent on consultancy increase, the need for empirical research into effective consultancy practices becomes more important. A well-specified, empirically based theory of consultancy would provide a structure for researching consultancy, allow for research findings to be interpreted within one theoretical framework, and allow for research findings to be combined to provide a more complete picture of consultancy.

Methodology for Theory Building

According to Torraco (1999), Dubin (1978) provides a comprehensive methodology for theory building that is particularly relevant for applied fields such as education and management, and is frequently used as a template for building theories in the behavioral sciences. The first five phases represent the theory-building component, and the last three phases cover the testing of the theory through empirical research. The first two phases are addressed in the next section of this paper, and subsequent papers will cover the remaining phases

A Theory of Consultancy

Units of the theory. The units of the theory are the concepts or building blocks from which the theory is constructed. There are six units offered in this theory: structure, relationship, attitude, language, experience, and technical. Figure 1 presents the six units in a rudimentary model illustrating their relative relationship to one another. Note the central role that attitudes play in the process and outcome of a consultation and the interactive relationship between attitudes and each of the other five theoretical units. Note also that all the interactions between the units occur within the context or medium of the relationship. Thus, the quality of the relationship either facilitates or impedes the smooth interaction of the units of the consultation. The six theoretical units are described below.

Structure. The structural domain provides a road map for an effective consultancy session. It covers the essential active ingredients and their approximate chronological order. The structure unit needs to be: a) systematic, in that the active ingredients of the consultancy appear at the appropriate times in the consultancy; and b) complete, in that all the necessary ingredients are included.

Five main active ingredients influence the effectiveness of consultancy in the structural domain: wants, needs, willingness, ability, and agreement regarding the specification of time. In our experience, the greatest impediment to an effective consultation is omitting from the consultancy structure the alignment of a client's wants and needs, and the conversation required to align these wants and needs with the consultant's willingness and ability to effectively attend to them. When a consultant provides what is wanted and not needed, he provides something without enduring value. Delivering what is needed but not wanted will almost always produce hostility directed at the consultant, an unwillingness to openly consider consultant input, and may result in the premature cessation of the consulting relationship. [Note: in absence of an acceptable way of dealing with sexist language, "he" and "she" will be used interchangeably. We hope this will not be a distraction for the reader.]

A second useful distinction is between what the consultant is willing to do and what the consultant is able to do. It is important to understand that a consultant is not able to do something by virtue of physical limitations but may be not willing to do other things for a multitude of reasons including legal and ethical reasons, as well as reasons of preference. In many cases, the consultant and the client must also determine what the client is willing and able to do.

An effective wanted and needed conversation results in stated "conditions for satisfaction" - *a priori* specifications that define the intended outcome of the consultancy. The goal of a complete wanted and needed conversation is to identify all conditions for satisfaction, stated so they are observable and measurable, and to agree to collaborate to achieve them. Failure to identify *all* conditions for satisfaction often leads to the failure of the consultation.

The final active ingredients (although, of necessity, the first to be addressed chronologically) consist of agreeing on the length of time for the meeting and agreeing on priorities. Priorities are set on the basis of importance of a goal as well as urgency. Thus, a more urgent but less important goal may be addressed first if sufficient time is available later to address the more important, less urgent goal.

Relationship. Whereas communication theorists once viewed communication as being between a sender and a receiver, all but a few now talk of dynamic audiences, communication partners, and interactants. Similarly, context is increasingly seen as having a major impact on communication, where that context is both the place or conditions under which communication transpires and the relationship between the communicants (Heath & Bryant, 1992). By including relationship as a unit of the theory, we assert that the quality of consultancy is directly related to the quality of the relationship between the consultant and the client. That assertion is supported by research in psychotherapy showing the quality of the therapist-patient relationship as a more powerful explanatory variable of the success of psychotherapy than any variable other than patient diagnosis (Horvath & Luborsky, 1993).

We assert that effective consultant-client relationships are characterized by two components: an absolute commitment to tell the truth and agreed-on goals for the relationship. We will describe each component briefly. The truth in this case is not a Universal Truth, but deals instead with the intention to disclose fully. One can be inaccurate and tell the truth if one is unaware of the inaccuracy. There is research evidence to support the link between quality relationships, trust, and telling the truth (Millar & Rogers, 1987). Similarly, the importance of truth is highlighted by social penetration theory (Altman & Taylor, 1973), which argues that disclosure and openness results in positive communication and positive relationships.

The second component of an effective consultant-client relationship is having agreed-on goals. Social exchange theory postulates that people negotiate rules and requirements of each relationship (Roloff, 1987). Morton, Alexander, and Altman (1976) also argued that a viable relationship requires a consensual definition of, and ground rules for, the relationship. Note though that agreed-on goals does not imply that the consultant and client must share the same goals: they can have different goals but the goals cannot be mutually exclusive; that is, achievement of one party's goals precludes the achievement of the other party's goals.

Attitude. The consultant is always implementing, consciously and non-consciously, the attitudes that she has toward the client, consultancy, the consultant's roles and responsibilities, and the type of issue she is dealing with. We therefore assert that the quality of a consultant-client relationship is directly related to the attitudes of the consultant, and that those attitudes can facilitate the relationship or establish barriers in the relationship. We recognize that clients and consultants alike enter consultations with a wide range of attitudes about the situation, themselves, and each other. We focus on the consultant's attitudes for two reasons. First, we have found that consultant focus on client attitudes provides a significant distraction to the consultant and impedes the progress of the consultation. Secondly, there is a large body of literature in social psychology indicating the existence of an attributional bias to externalize responsibility when a situation is going badly and to internalize responsibility when a situation is going well. Thus, when consultations are difficult, consultants subject to this attributional bias are likely to blame clients for being *difficult* and to diminish their effectiveness.

Attitudes are assumptions, beliefs, characterizations, points of view, opinions, expectations, and positions. Some may be long-held and general about consultancy, others may exist from the historical context of a specific consultancy episode where both the consultant and client have leftover attitudes about each other, the issues at hand, their respective abilities, etc. Role expectations provide another source, where the consultant and client have expectations of each other's roles.

Attitudes can be positive or negative, by facilitating or impeding the progress of the consultancy. For example, the consultant attitude of "the client knows his or her situation better than anyone else" is likely to facilitate progress, whereas "I am the expert and am here to provide solutions" could impede.

Of primary importance is the attitude held by the consultant toward the client and toward the consultant's role. This could be usefully termed the consultant's operational philosophy. For example, does the consultant enter a client relationship with the attitude that he or she must "must have all the answers" or that "the consultant must be available all the time"? Such attitudes can affect the quality of the relationship. Similar examples exist of the consultant's attitudes toward the client.

Given how attitudes influence behavior, raising them to a conscious level is important (Devito, 1986). However, many present attitudes are outside a consultant's awareness, and becoming aware of them requires a high level of courage and commitment. Scrutinizing one's own attitudes can be confronting, embarrassing and personally painful. Because of the discomfort involved and the nature of psychological defenses that operate reflexively, consultants often find it helpful to work backwards in the process by identifying behaviors, including verbal statements, and raising the question, "What beliefs, attitudes, characterizations, or opinions must be present for a behavior to have occurred or to have been omitted?" (See Figure 1.)

Note that in the above statements, we have not asserted that there is one set of attitudes that best fits all consultant-client situations. We do however argue that the effective consultant must be maximally aware of her attitudes because those attitudes are expressed in all aspects of the consultancy to some extent.

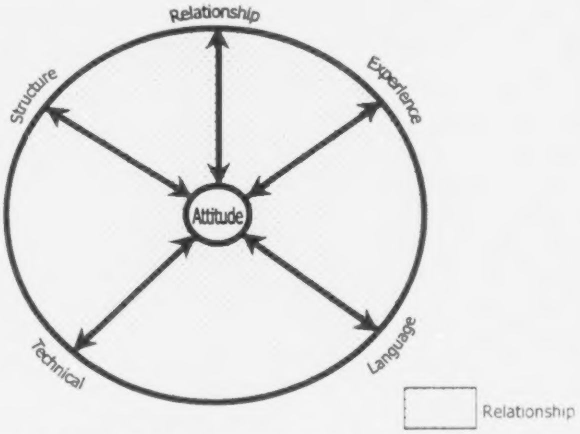

Figure 1. A model for the relationships among the theoretical units of a consultation.

Experience. One aspect of the consultancy process is the awareness of experience, or the "experiencing of experience." The consultant's moment-to-moment experience within a consultancy meeting can provide a valuable source of information if the consultant can access that information non-defensively. Effective consultants are therefore required to be "congruent" by accurately matching their experience with their awareness as they take full advantage of experience as the most immediately accessible (to the consultant) of all the units in the theory.

The two sources of experience information available to the consultant are cognitions and feelings. Cognitions are thoughts, some of which may appear unrelated or even random. Feelings here refer to emotions and physiological experiences, but not to perceptions, interpretations, or evaluations. For example, "I feel angry" is an emotion; "I feel nauseous" is a physiological sensation; "I feel that you are an idiot" is a judgment, perception, or evaluation. Whenever the consultant finds thoughts running through her mind that are evaluative, judgmental, or self-concerned, these thoughts interfere with the relationship and form a barrier to effective consultancy.

As the consultant becomes more competent at recognizing his experience, he becomes more aware of his anxiety, anger, upset, and defensiveness: four examples of experience likely to have a particularly negative effect on the consultancy. Each can be understood and overcome within the consultancy context: anxiety by focusing on the present and reducing self-consciousness by concentrating on the client; anger by attending to the vulnerability that is most likely generating it; upset by identifying its source - either in unfulfilled expectations, blocked goals, disingenuous interactions, or broken agreements; and defensiveness by the consultant maintaining an awareness of his commitment to getting the job done, as opposed to managing impressions.

A consultant may also find himself in what we term an "emotional cloud." This happens in situations when emotions and feelings are so deeply involved that rational dialogue is lost. One possible emotional cloud is anxiety. As the Yerkes-Dobson law states, performance increases as anxiety increases up to an optimum point beyond which performance declines rapidly (Warburton, 1979). In such situations the most prudent action is for the consultant to withdraw from the situation, agreeing another time to return to the conversation.

Note that whereas the consultant's experiences are available directly to him, the client's can only be hypothesized by the consultant and must be validated through conversation with the client.

Language. Language is vital to human communication. Through the words chosen, the consultant creates, manages, and shares her interpretation of reality. Those are the tools of communication that provide the consultancy episode with texture and specificity, and allow both the consultant and the client to make distinctions. Those words are therefore a key to identifying the attitudes of both the consultant and the client for, as Berlo (1960) asserted, their meaning lies in the people and not in the words themselves. Words can therefore augment or impede the efficiency of consultancy. When used masterfully words provide clarity, certainty, and velocity of action (that is, action characterized by direction and force).

Action-oriented language theory views communication as a function of intention: "we communicate to influence - to affect with intent" (Berlo, 1960, p. 12). Intention allows for systemization, which in turn allows for something to be produced reliably. Consultancy consists of a combination of speech acts, actions in language which can be classified into five categories: assertives or claims; directives or requests; commissives or promises; expressives; and declarations (Austin, 1962). These are used in four different conversations at different stages of the consultancy: initiative conversations; and conversations for possibility (or understanding), performance, and closure (Ford & Ford, 1995). In our experience, the key language components for effective consultancy are: expressing conditions for satisfaction during the conversation for possibility (covered under the structure unit); making agreements through requests during conversations for performance; dealing with complaints and making effective apologies; and listening.

Requests and agreements are the most useful form of language for producing actions and results (Austin, 1962). They should be based on clearly defined conditions for satisfaction. Within consultancy, granted requests form the basis of agreements between the consultant and client designed to lead to the fulfillment of the conditions for satisfaction. Denied or counter-offered requests lead to a continuation of the conversation for performance. One of the most common reasons for breakdown in consultancy is a lack of rigor in conversations for performance, by failing to reach agreements, often because one or both parties assumes the other understands the required actions without making them explicit.

Consulting breakdowns often occur around complaints. A complaint is only valid when an agreement has been broken. When that happens the appropriate action is an effective apology. An effective apology has two parts: the acknowledgment of a broken agreement and the inconvenience caused; and the implementation of corrective action. Perhaps the most direct and effective response to an invalid complaint is that of asking the other person whether they wish to make a request.

Finally, perhaps the most useful observation about effective communication is that what is important is not what we say as much as what the other person hears. Often we ignore the realization that we each hear through the filters of our experience and personal histories. Thus, to communicate effectively: listen to what we say to ensure that we say what we intend; and listen for what the other person is hearing.

Technical. This unit covers the technical content of the consultancy, which takes two forms: the knowledge and expertise expected from the consultant's discipline (statistics, management, engineering, etc); and technical consulting issues concerned with completing the structure of consultancy which may not normally be part of the consultant's discipline (e.g., the need for HRD consultants to understand data analysis). The quality of the former is established by the discipline which generally has agreed-upon standards. The variety and depth of those standards means they cannot be covered in this paper, instead we will simply point out that the quality of the information disseminated in the technical domain is a necessary condition for effective consulting. The quality of the content is not, however, sufficient unless one believes that successful consulting can occur without implementation.

Laws of interaction. The relationships among the concepts (units) of a theory are described in the theory's laws of interaction (Dubin, 1978). The laws of interaction show how changes in one or more units of the theory influence the remaining units. The interaction in this proposed theory are significant given how each of the units are interrelated - for example, effective consultancy results in part from a quality relationship, which is influenced by the attitudes of the consultant, which are identifiable from the consultant's experiencing and from analysis of the consultant's language. Given the multiple relationships between the units, we have identified here what we believe to be the three main interactions among the theory's units.

1. From an ideological perspective, attitude is the most fundamental unit, influencing (and in turn being influenced by) relationship, experience, and language. Attitudes are the consultant's world view - her beliefs, characterizations, and expectations about consulting, the client, and herself. These attitudes affect the quality of the consulting relationship by limiting and shaping attention and perception. Attitudes are expressed through language, and in turn the language used interacts with attitudes. These language-attitude interactions contribute to the consultant's moment-by-moment experiences which in turn are interpreted using language (Lazarus & Folkman, 1984).

2. *From a utility perspective, language drives consultancy through interactions with the other units.* Three units are observable: structure, language, and technical. The other three are inferred: relationship, attitude, and experience. For example, attitudes are inferred directly from language, or can be inferred from structure and validated using language. Similarly, what the consultant experiences is expressed through language.

3. *From a systems perspective, consultancy requires the systematic and coherent application of all six units, and as such each is necessary but not sufficient. Failure to pay attention to any one unit will threaten the effectiveness of the consultancy.* An optimal consultation requires a consultant to pay attention to all six units.

Implications for Future Research

The first two stages of Dubin's methodology for theory building have been completed using a combination of existing theories in psychotherapy, psychology, and human communication, as well as existing writings on consultancy. The theory has also benefited greatly from the analysis of thousands of videotaped consultations and discussions with hundreds of consultants from various disciplines. The theory has also been refined through training consultants, and to date has been validated through its successful use in such training programs. The next stage is to complete the final phases of Dubin's methodology by conducting empirical research. Part of that research will test the interactions asserted in this paper. This project is underway.

Future research is also needed to assess the boundaries of the theory, particularly in terms of disciplines and culture. To date, the theory has been developed from theories and practice in North America and the United Kingdom, and has been applied with consultants from HRD, HRM, management, statistics, and economics. Research is required to determine the boundaries of the disciplines to which it applies and to ascertain the impact of different national cultures on its utility.

Implications for HRD

The theory is proposed for application to all disciplines, and so should benefit HRD consultants in similar ways to consultants from other fields. The intention is that HRD consultants will experience greater effectiveness in their consultancy work as a result of paying attention to the six units described in this paper and their inter-relationships. However, the theory also has a particular two-fold significance to HRD. First, the theory has already been used successfully as the basis of training HRD consultants in a UK public sector HRD team, and may therefore be of interest to practicing HRD consultants and HRD teams whose trainers are shifting over to more of a consultancy role. (The use of the theory to train HRD practitioners will form the basis of a future article.) Secondly, HRD practitioners may be interested in the implications of this theory for the training of consultants, and a process for training consultants in the application of this theory is currently being evaluated prior to submission for future publication.

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The Method of Narrative Change Accounting

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Our purpose is to develop a method for describing organizational change processes. We believe that there is a need for this kind of method. Especially, many case study reports could offer a deeper understanding to the reader if they would present change narratives. Our theoretical background is eclectic. Elements are adapted from social psychology and the theory of social action, i.e. ethogeny. In addition, the sources for the current method development have been the various practices of ethnography, film theory and oral historical research.The method of narrative change accounting has been applied in one industrial organization. The case was an assembly workshop producing electric light systems. During the change process the personnel transformed their organization from a traditional single-vacancy organization to flexible and self-directive groupwork. Experiences extracted from the case are discussed, and implications for the research and practice of HRD are recommended.

Key words: Narrative Accounting, Organizational Change, Qualitative Research

During recent years, the case study approach has become a popular research method, especially in the organization development. However, there are only a few written and published change narratives. Most of the case study reports do not include descriptions of change processes; there are only descriptions or measurements of the situation before and after the intervention.

Why do we need organizational change narratives? First, there are problems in treating an organizational change as achievable through rational, planned strategies. Human systems do not behave in a rational and linear way (Gustavsen, 1992, 1996; Senge 1990; Tosey & Nicholls ,1999). As Marris (1974) has said, all real changes involve loss, anxiety and struggle, i.e. if we do not describe the process of change, we neglect much information. This also militates against the principles of learning (e.g. Tosey & Nicholls, 1999).

It is difficult to understand and evaluate the meaning of change if there is not enough information about the process that has preceded it. An organizational change might involve painful episodes which have a negative effect on the way people experience renewals (Harrison, 1995; Noer 1993). On the other hand, participatory intervention strategies might even produce commitment and positive evaluations of unwelcome changes (Sulander, 1992). Therefore, we believe that there is a need for methods to describe organizational change processes as narratives. In this paper we present the method which we are developing in Finland. We also demonstrate the way we have applied it in describing one organizational change process.

Purpose. The present study aims to clarify the method of narrative change accounting: the premises, the theoretical and practical starting points, and finally the application of the method. The method cannot be evaluated critically based only on the viewpoint of one empirical case. Rather this study offers innovative elements into the methodological discussion within HRD and related fields.

Background Of The Method

The most important background is the theory of social action, i.e. ethogeny by Harré and Secord (1972), later especially Harré (1979, 1985, 1994). Also *ethnography* (Eräsaari 1995, Hammersley 1992, Pratt 1986, Schwartzman

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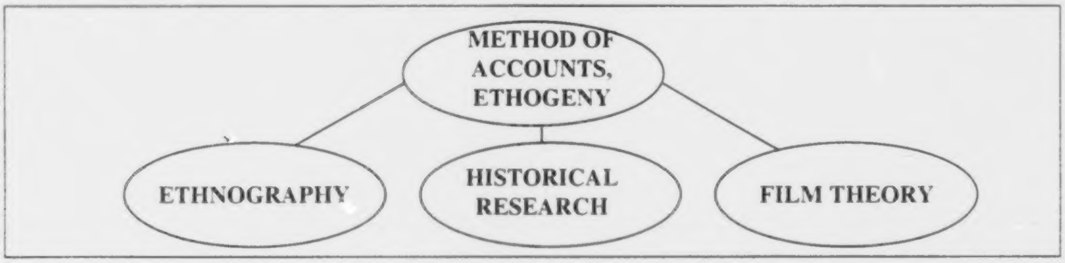
1993), *film theory*, (Arijon 1976) and *historical research* (Dunaway 1992, Thompson 1988 and Yow 1994) (Figure 1) have been applied in the framework of the narrative change accounting.

Ethogeny is quite an old, yet still interesting and distinctive social psychology approach. The birth of ethogeny dates back to the year 1972, when Harré and Secord published the book *The Explanation of Social Behavior*. It became the declaration for a new discipline. This book can be seen as a part of social psychology's crisis discussion in the 70s. In Figure 1 Theoretical background of the method of narrative change accounting.



This discussion one of the main themes was the question of the position of laboratory experiments: at that time the majority of the studies in social psychology were based on experiments in laboratory settings (Uotila & Ylijoki, 1984). Harré and Secord (1972) criticized this kind of understanding of human beings, based on the idealization of modern natural science exactitude and its mechanistic model of man.

The motto of ethogeny is: "for scientific purposes, treat people as if they were human beings" (Harré & Secord 1972, 84). This demand clearly demonstrates ethogeny's effort to criticize the dominating paradigm through irony, and to emphasize the need for a new research approach. As the word ethogeny is quite similar to ethology, which means researching animal behavior in natural environments, not in a zoo or a laboratory. Parallel ethogeny means researching human activity in ordinary life situations: not in laboratories but on the streets, in home, in cafés and in lecture rooms. (Harré 1974.) The highly ambitious purpose of ethogeny is to explain why people act as they act. According to Harré and Secord (1972), human activity is based on meaning giving, a human being is seen as active and self-directive. On the other hand, personal freedom is not absolute. Social system controls human activity in various ways. (Myllyniemi 1998.)

As a research approach ethogeny is obscure. In addition, there are only a few empirical studies using ethogenian methods. Despite of this fact, we have found its central concepts useful and we have applied the concepts of *episodes, accounts and negotiations* in our research. Harré and Secord (1972) define *episode* as any natural division of social life (from buying chocolate to studying at the university). The contents of social episodes do not include only overt behavior, but also the thoughts, feelings, intentions and plans of the participants. *Accounts* are the actor's own statements about why (s)he performed as (s)he did and what social meanings (s)he gave to the actions of her/himself and others. (Harré and Secord 1972). Negotiation is the process through which the researcher and actors try to find a common account. They try to answer to question: what happened or what is common interpretation? The absolute truth cannot always be met and the possibility of endless reinterpretation or the possibility that there is no common account must be accepted (Harré and Secord 1972).

The Description of Narrative Change Accounting

In this chapter we describe the method of narrative change accounting. The production of change narrative includes seven phases: writing the opening story, describing the context of research, writing a master story, gathering accounts, writing a change story, negotiating for a change story and editing the change story (Table 1).

Opening story. In addition to using the data collection methods of ethnographers (e.g. participant observation) we have applied their way of telling opening stories. Opening story is a narrative which describes researcher's access to the field, and operates as a prelude to, and commentary on, what follows (Pratt 1986, 42). We have included it in our method, because stepping into a setting for the first time might be the most significant phase of the entire change process (Neumann 1997, Scwartzman 1993). The surprises, differences, misunderstandings and such that occur in the first encounters may later foreshadow major concerns and issues in a change process and its documentation.

We have also adopted the ethnographers' way to write an opening story by presenting the researcher as a

person (Erasaari 1995, Pratt 1986.) As we experimented with different modes of narration, it became clear that writing from the view of the first person "I" was a way of allowing readers to follow the researcher through the narrative.
Describing the context of research. All of the groups that an organizational ethnographer may study will be composed of specific individuals with particular roles, interacting with each other on specific occasions. Depending upon the size and complexity of an organization, just trying to describe the various parties and gatherings that make up a setting can in itself be a daunting task. (Scwartzman 1993.) It is also important to take the participants' accounts into consideration and to describe the context as they see it.

Table 1
The phases of producing change narrative (Laitinen 1998).

PHASE	THE CONTENT OF PHASE
Writing the opening story	Describing the researchers' access to the field
Describing the context of research	Describing the place where the change occurs
Writing a master story	1. Gathering data connected with the change process 2. Selecting episodes from the data 3. Listing episodes in chronological order
Gathering accounts	1. Choosing the key episodes 2. Gathering accounts from people who participated in the episodes
Writing a change story	Correcting and completing the master story with the data of the accounts
Negotiating for a change story	1. Reading of the story by those who participated in the episodes 2. Discussing, how the change story will have changed to reflect the reality and the experiences of the participants
Editing the change story	Applying parallel story-telling

Writing the master story. The first core phase in the production of the change process description is to write a master story. As the name implies, a master story is like a master shot in a film. Instead of using a single camera, we use a single viewpoint, from which the event is recorded/presented in its entirety (Arijon 1976). This phase contains three sub-phases: gathering the data connected with the change process, selecting episodes from the data and listing them in a chronological order. It is not yet necessary to include all details in the master story: the main aim of this phase is to present the sequence of episodes.

The methods to collect data depend on the nature of the study. It is possible to use qualitative interviews, videotaping and documentation, such as the field notes of the researcher and participants and different kinds of reports. From our point of view, the action research approach undoubtedly provides the best access to the processes under study (Gummesson 1991 and 1993).

In order to be able to treat people as human beings, it must be possible to accept their commentaries on their actions, though revisable, as authentic reports of phenomena.
Gathering of accounts. The current phase means that the researcher chooses the key episodes from the master story and then interviews the individuals who have participated in the episodes. The selection of the key episodes should reflect what the participants feel as important. The key episodes should also have some meaning for the whole change narrative - they should carry the plot or they should include some kind of turning point of the change process. The aim is to get a close contact with the participants' and record their interpretations of the change processes and especially of the key episodes.
Writing change story. This phase refers to correcting and completing the master story with the data of the accounts. It is also one of the most important phases in analyzing the data. Accounts, observations and documents are processed together in order to get a narrative which would describe, how the change process has proceeded and how the participants have experienced it.

The model of how this phase works looks like history writing, especially oral history writing (Thompson 1988, Yow, 1994). If we consider, e.g. the first oral historian -
Thucydides - who sought out people to interview and used their information in writing the History of the Peloponnesian war, we notice that our method is quite similar: we combine and critically evaluate information which we have

received from different sources.

In practice, the negotiation phase consists of two sub-phases. The first sub-phase is the reading of the story by those who participated in the episodes. The second one is discussing, how the change story will have changed to reflect the reality and the experiences of the participants as well as possible.

Editing the change story. The parallel story-telling in is one of the most frequently used forms of film-editing. We have applied it to our change story because it covers a great number of possibilities in the interaction of two narrative lines. Where the degree of knowledge shared between the characters of the story, or between the film and its audience is variable the alternatives can be seen as those in which (Arijon 1976): 1) both story lines support each other, and the data that both contribute (alternately) builds up the story; 2) in one line, the movement or intention is kept the same, while on the other the reactions to that steady repetition are varied; 3) the characters involved in both narrative lines are unaware of what the other group is doing, and only the audience has all the facts; and 4) the information given in both narrative lines is incomplete, so that the characters have all the facts, but the audience is purposely kept in the dark, to stimulate its interest.

Parallel film-editing is based on the fact that when we are told a story we unconsciously want to know two things: what action is going on and how the people are reacting to that action (Arijon 1976). If the storyteller forgets to keep track of those two things, his audience will be confused or insufficiently informed. Most of the film-takes contain action and reaction within the length of the shot. Witness this example where two shots are used:

shot 1: the hunter moves his rifle from side to side (action) and fires (reaction)

shot 2: a flying (action) bird is suddenly hit and falls (reaction).

But if we showed shots 1 and 2 without grouping the actions and reactions, our understanding of what is going on would not be as effective as if we grouped them as follows (Table 2). The alternation of shots: shot 1 - shot 2 - shot 1 - shot 2, is known as parallel film-editing (Arijon 1976).

Table 2
Parallel film editing.

the example of parallel film editing	the structure of parallel film editing
the hunter moves his rifle from side to side, aiming off screen	shot 1: action
a bird is flying in the sky	shot 2: action
the hunter fires his rifle	shot 1: reaction
the bird is hit and falls	shot 2: reaction

An Empirical Case: The Profit Center Five in Idman

The opening story. In this quotation we present two first paragraphs of the opening story. They describe the researcher's access to the development project and the first meeting between researchers and company representatives:

"It was in March 1992 when I first time heard about the factory of Idman. At that time I was working as a research assistant in a group which was studying groupwork. My forewoman told me that we were contacted by the enterprise and that they were suggesting a meeting. She said that I should also participate, because my master's thesis in adult education was almost completed and I would need a job after graduation.

Besides us (researchers), there were two production managers from Idman at the first meeting. The production managers told us about Idman and their units. Two factories had been combined, and the Mikkeli factory, whose business had to be suspended, transferred its functions to Mäntsälä. At the same time, the operational organization had been divided into profit centers. The purpose of this renewal was to develop a more profitable and flexible way of working. The final aim was the customer service-based production organization, where power and responsibility would be delegated to the floor level. In the firm, the people were talking about turning the organizational pyramid upside down.

The starting point of the project was uncertain: 20 persons in Mantsala and 100 in Mikkeli had lost their jobs. Others had shortened working hours. In particular, foremen and other clerical workers were anxious about keeping their position. In addition, the top management of the enterprise regarded productivity and quality figures as being too low. The position of profit centers was not yet clarified and they were still seeking a new model of working.

On the other hand, the profit centers were interested in developing groupwork and the production managers were committed to co-operation. For these reasons we decided to continue discussions: we came to an agreement about the next meeting in the Mäntsälä factory."

Describing the context of research. *"The assembly workshop, which functioned as a pilot for the new working model, manufactured electric light systems. The light systems were especially aimed at office and business environments, such as stores, hotels and restaurants. The variety of the products was changing rapidly and they were implementing a new, developing product group called Downlight.*

As a physical space the assembly workshop was a very ordinary factory hall: working stations/tables in two direct lines, doorways on opposite sides of the factory hall and corridors for forklifts. The office in the corner of the factory hall had two rooms. The foreman and the production planner were working in the first room, and the production manager was in the second room.

As so often in light assembly work in Finland, all workers were women. Their age ranged from 30 to 60 years. The average was 45 years. In this respect, the workshop was not exceptional, because persons of forty-fifty were the most common age group in the factory. The most typical educational background was completion of primary school. Only one had studied in a vocational school though not metal or electricity. Most of them had 10-20 years work experience in the organization, and some of them had made their whole work career there.

The roles of the production manager and supervisors were central to all functions in the workshop: in communication, in planning and in decision making. The contacts between units inside and outside of the workshop were occasional and restricted to the managers.

In practice, assembly work always included the same repetitive phases of work. When an assembler started to produce new series, she first read the work order. After that she looked for the parts and the components in different boxes and forklift loads and arranged them in small containers at her work station. Then she combined parts of a stem with a pneumatic screwdriver. After that she attached electrical components to the stem. Finally, the product was tested visually and with an electricity test device. After the testing she glued her distinguishing mark and the other stickers (type of device, switchboard diagram etc.) onto the finished product. The last phases were packing and transferring to the stock or shipping department. When the series was completed, the assembler reported to the foreman."

Gathering accounts. The accounts were collected from all workers, the foreman, the production planner, and the production manager. In other words, all in the workshop were interviewed. The fulfillment of the interviews was quite similar as the technique of narrative interview (Roos 1988) which consists of two sub phases: first, the interviewee is allowed to speak freely; secondly it is possible to complete the interview by presenting detailed questions. The interviews were started openly by asking, which were the most important changes from the viewpoint of the interviewed. The purpose was to make sure that the most relevant episodes would have been taken into the change story. After that the interviewer and interviewee discussed about the episodes listed in the master story.

Table 3. Parallel story telling in the case.

The example from the organizational change story	the example of parallel film editing / story-telling	The structure of parallel film editing / story-telling (compare with Table 1)
The production manager was hard pressed and tried to find solution to a better control material flow	the hunter moves his rifle from side to side, aiming off screen	Shot 1: action
The workers listened when the managing director talked about turning the organizational pyramid upside down	a bird is flying in the sky	Shot 2: action
The production manager bought a conveyor belt and gave notice to the workers	the hunter fires his rifle	Shot 1: reaction
The workers were highly of-	the bird is hit and falls	Shot 2: reaction

fended, because they had not been included in the planning, despite the speeches about a new, brave co-operation		

Master story and change narrative. The beginning of this chapter does not look at all like a narrative because of the use of figures and tables. However, they are needed to clarify and illustrate our ideas about master story and parallel story-telling.

In the previous master story quotation we present the sequence of activities during the first phase of the change story (Figure 2).The development project in Idman consisted of three main phases during 1992-1995: 1) the analysis of the present state, 2) the vision-oriented development phase and 3) the phase of single interventions.

In the next quotations we zoom in on episodes which were connected with the difficulties to understand the meaning of participatory decision-making in the very beginning of the project in January 1993. In this quotation we also apply parallel story-telling (Table 3).

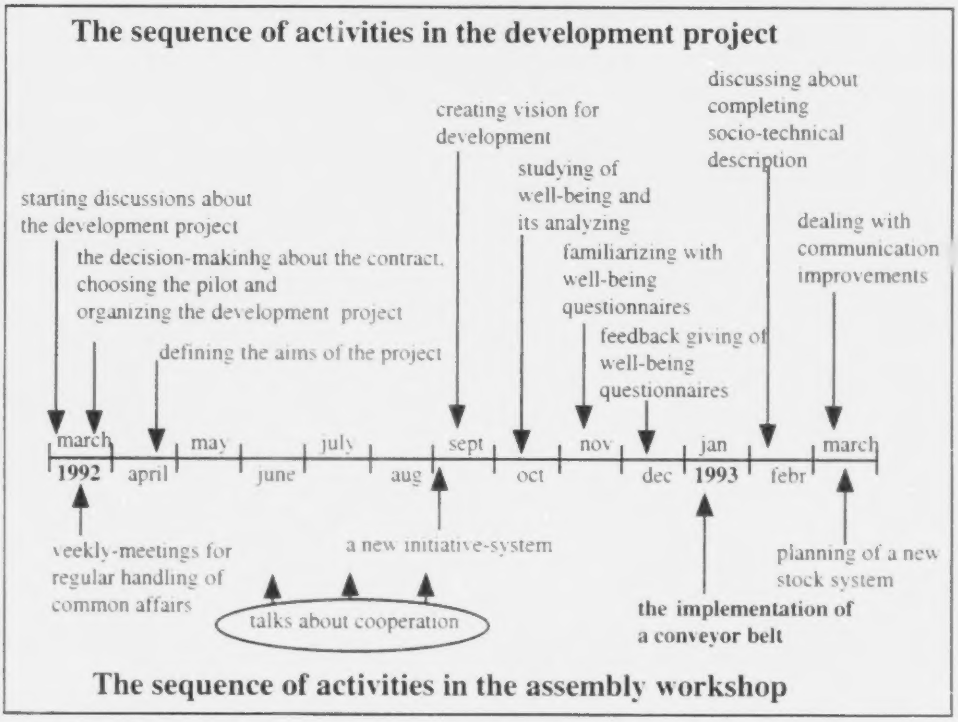

The sequence of activities in the development project
discussing about completing socio-technical description
creating vision for development
studying of well-being and its analyzing
starting discussions about the development project
dealing with communication improvements
the decision-makinhg about the contract, choosing the pilot and organizing the development project
familiarizing with well-being questionnaires
feedback giving of well-being questionnaires
defining the aims of the project
march
may
july
sept
nov
jan
march
1992
april
june
aug
oct
dec
1993
febr
veekly-meetings for regular handling of common affairs
a new initiative-system
planning of a new stock system
talks about cooperation
the implementation of a conveyor belt
The sequence of activities in the assembly workshop

Figure 2 The first phase in the development project was an analysis of the present state.

"At the beginning of the development project the role of the project group was very educating and analytical. Background theories about socio-technical change, co-operative work-culture, the well-being of the employees and the concept of "good work" were dealt with. At the same time the variety of products was rapidly increasing and the assemblers had more and more difficulties in meeting delivery schedules. It was also commonly known, that work efficiency was low. For this reason, the representatives of the organization, especially the production manager, wanted to stop the socio-technical work description and to start making concrete improvements as soon as possible.

During the autumn of 1992 there were many talks and articles in the company magazine about co-operation and participatory decision-making in the organization. In his New Year's speech, the managing director described how the organizational pyramid had been turned upside down and power and responsibilities had been delegated to the shop floor. In the public discussions some co-operative metaphors, like "rowing the same boat", were also presented.

I phoned the production manager in January 1993 to agree upon the time for interviews. He said that the time which I had suggested, was not good because the new conveyor belt would be implemented at the same time. The aim of this renewal was to decrease the amount of non-profitable work, to make intermediate stores smaller and to save space in the profit center. I was surprised, because there had been no discussions about this change beforehand in the project group.
In the assembly workshop the people were highly offended and frustrated, because they had not beenincluded it the planning, despite the talk about a new, co-operative activity model. They told me that the production manager had ordered the conveyor belt and had just informed the workers a few days before the implementation. 'Always tooting co-operation, then order without discussion' and 'If they want a dialogue, this is a wrong attitude', were typical comments presented to me."

Negotiation. Negotiation was the process (before editing phase) through which the personnel read the change narrative. Then all participants - the researcher and the personnel - presented their own accounts and searched common understanding about the change process. In this case, it was quite easy to produce a common interpretation. The corrections and amendments suggested, and made, were rather details than radical changes. The possible reason for a consensus might be that the project group had written quite many interim reports before producing the change narrative.

Conclusions

When we started the method development there were no prototypes. Now it is obvious that the method is not unique: The approach presented here has a quite much in common with the work of researchers from MIT (Roth & Kleiner, 1995; Roth, 1996). They developed an approach that they called as learning history. It is aimed to enhance the organization's learning capabilities. One apparent similarity between our method and the learning history approach is their eclectic nature. They both apply different theoretical sources - the learning history form, e.g. draws upon theory and techniques from ethnography, journalism, action research, oral history and theatre.

By applying the method of narrative change accounting, we were able to produce one change narrative. However, this does not mean that the method is completed or concluded. We see this phase more as an experiment or as a starting point for discussion.

According to Ceglowski (1997), there are two issues to consider regarding the use of an experimental writing genre. The first issue is methodological, and the second is discipline-specific. The first issue is how will experimental textual forms be evaluated. She refers to Denison (1996) who suggests that researchers should check with participants to verify that the stories accurately depict their actual experience. He also recommends that these new writing formats be judged by the standards more closely aligned to art or literature.

We have tried to design our method to meet both criteria. According to our experience the negotiation between researcher and participants verify the story quite well. On the other hand, our aim has also been to meet the second criteria by using ideas of film theory and screenwriting. However, we are not satisfied with our performance in this area: there are still so many issues in this area that our method does not address, such as the questions of an interesting plot (Arijon, 1976; Blum, 1984).

Ceglowski's (1997) second issue is how will various disciplines respond to researchers who use experimental writing genres? Richardson (1996) has pointed out that, although researchers who employ such methods may be labeled as good writers, the question remains as to whether they are really doing research.

We agree that there are problems in crossing the borders of the traditional scientific discipline. However, we see that there is a real need for these kinds of narratives in adult education and we also believe that the attitude towards this kind of experimental writing is becoming more positive.

Implications to HRD. Applying the method of narrative change accounting provides benefits for organizational research and theory. Its results describe the entire change process, not just the outcomes of a certain program or intervention. The traditional pre- and post-test setting does not acquire understanding about the reasons, why some change processes are more successful than others. The experiences, opinions, beliefs, and stories of the participants are the most crucial elements in understanding those reasons. It is also possible that by applying the method in various contexts there will occur some consistencies between different programs, organizations, etc. And this may benefit the organizational theory, as well.

The narrative accounting is applicable, when there is a crucial change taking place in the organization or across the organizations. Sometimes a change, which may seem a minor one for an external observer, could be a crucial one for them, who are involved. And it is necessary that participants of the change are voluntarily giving interviews and having negotiations with the researcher.

The nature of HRD is in changing. For instance, training, career development, and organizational development are focused on change. Sometimes it can mean a change in cognitive structures on an individual level, but it can be an organization-wide change process, as well. Therefore, it is complicated to offer an example to which the narrative accounting will not be applicable in any circumstances.

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Colleges of Education and Internal Consultants

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Colleges of education are being reshaped for a variety of reasons. On-campus and off-campus pressures are driving the need for strategic change. However, rarely is the collective expertise of the personnel within a college of education effectively applied to its organizational change efforts. This paper provides an overview of the literature that pertains to internal consulting. It suggests ways in which faculty members may build skills and knowledge in the role of internal consultant.

Keywords: Consulting, Organizational Change, Teacher Education

I was recently reorganized. It was not a particularly pleasant experience. January, 1999, my colleagues and I attended a college of education meeting and we were informed of the seven new departments in which we would be working. No faculty meetings had been conducted to discuss forming new departments. The deans of the College had crafted this plan. A memorandum disseminated at this meeting provided the Dean's rationale for the change:

> Two questions which seem to arise are "why do we need to reorganize" and "what rationale was used in expanding the number of departments within the college?" From my first day as acting dean through today, I have continually and consistently said that as a college, we have not been organized in a matter that others, outside the university, or inside, for that matter, can understand. We also have been resting on a distinctiveness of a college of education that once excited and that has gone through several iterations of minor adjustment, but which has not changed distinctively in a manner befitting the faculty expertise that we have nor the needs of the constituencies we serve. We need a new "distinctiveness" to reposition the college in the region and nationally. These reasons, while perhaps arguable by some who will read this document, have served as the basis for the reasons for our changing.

I wondered why organizational change should occur this way. Within the college were several faculties whose members possessed considerable experience and knowledge with regard to organizational change. How could a few deans create new departments and assign faculty members to them? This phenomenon caused me to ponder how faculty members might be better utilized as internal consultants and change agents within a college of education.

Research Problem

It is not a new phenomenon for faculty members to be under-utilized as change agents within their respective colleges. Their lack of participation in the change process may be traced to their personal beliefs and actions, the leadership style of the administration, or systemic constraints of the college. However, faculty members need to be involved in the processes of change, and, as noted by Ryan and Oestreich (1991, 200), contemporary workplaces are "composed of people who expect to participate." But do faculty members possess requisite skills to participate in the change process? Howey and Zimpher (1990, 364), noting the work of Clark and Guba, observed that the "predominant governance pattern of higher education is collegial, but no one is specifically trained to engage in and foster collegiality. Few can initiate change unilaterally." Lack of skill as a change agent can be problematic for faculty members, for as Freiberg and Waxman (1990, 631) stated, faculty members can call attention to "non-supportive conditions and others as the source of their problems, but, in the final analysis, change must be instituted from within." Faculty members might be unaware of how they can function as internal consultants within their colleges. They may possess content knowledge and experience regarding organizational change, but they may not possess knowledge and skills necessary to function as internal consultants. This manuscript provides an overview of literature pertinent to internal consulting and poses suggestions for faculty members who may serve as internal consultants.

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Theoretical Framework

It is interesting to compare the trauma that colleges of education have faced during the past twenty years and the turbulence experienced by businesses and industries during this same time period. Organizations were reeling during the 1980s from reverberations of a very chaotic business environment. Similar to small and large businesses, colleges of education faced uncertainties as they attempted to interpret their markets and make strategic decisions. Organizational leaders of both the public and private sector struggled to understand ambiguous and oftentimes contradictory signals conveyed to them by their environments. Deans of colleges of education faced perilous times, as they experienced shrinking revenues, competition for students, and diminished political clout (both on and off campus).

It seemed as though the tools being applied by these leaders were increasingly cumbersome and ineffective. Strategic planning, a method that many large organizations implemented during this time period, produced long-term plans that were often obsolete by the time the planning document was punched for a three ring binder. Leaders wondered what strategies and processes would allow their organizations (both public and private) to adapt to a free-wheeling environment, flex in response to external pressures, and react swiftly to market driven changes (Roth, 1994).

Select writers emerged in the 1990s who espoused a different set of ideas for enhancing organizational survival. These writers questioned an organization's reliance on strategic plans that were restrictive in their applications and based on nebulous scenarios of the future. Writers such as Senge (1990), Watkins and Marsick (1993), Marquardt and Reynolds (1994), and Redding and Catalanello (1994) advocated that learning is a key competitive advantage that allows organizations to survive the uncertainties of the global economic environment. These authors affirmed learning -- individual, team, and organizational -- as a means of keeping organizations responsive and adaptive to the hazards of unforeseen internal and external conditions.

It is ironic that colleges of education -- bastions of expertise on learning -- rarely tap into that reservoir of collective expertise when orchestrating organizational change. Many business leaders, on the other hand, view *learning in the workplace* as a key business strategy. Organizational learning is considered by many leaders to be an important part of the strategic business plan.

Research Design and Questions

The research method is literature review and analysis. Research questions include:

- What are the functional roles of internal consultants?
- How might internal and external consultant roles be meshed within a college of education?
- What strategies and behaviors might faculty members apply as internal change agents?
- How might faculty members collaborate with others as internal consultants?

Definition and Description of Internal Consulting

Jargon and terminology can sometimes be intimidating as one attempts to find meaning in a concept. The following definitions are offered to help clarify the distinction between types of consultants (Lippitt and Lippitt, 1984).

> The *internal consultant*. A helper (professional or nonprofessional) who is considered a member of the client system or a closely related system. (5.7)

The *external consultant*. A helper (usually professional) who has a minimal or no organizational/political relationship with the client system. (5.7)

The *internal - external consultant*. A helper (usually professional) who is located at the headquarters of an organization and is "sent out" to field units for consultant work. The consultant is an "insider" to the total system but an outsider to the client system. (5.7)

Internal consultants may be called upon to fulfill a variety of roles for an organization. These roles will not be described in detail in this paper. However, readers are encouraged to review the writing of Lippitt and Lippitt (1977) for an examination of the following roles: objective observer, process counselor, fact finder, identifier of alternatives and linker to resources, joint problem solver, trainer/educator, information specialist, and advocate. Behaviors associated with these consulting roles were further delineated by Newell (1988) in an article that identified a need for more innovation and responsiveness in the workplace.

Differences between the roles of internal and external consultants are worth noting. The success of the consultant will be judged by how he/she performs within a setting or context. The consultant will function and react differently, hinging upon whether he/she is a member of the organization. If the consultant is an "insider," then this individual will have privileged interpretations of the work environment that may be unbeknownst to an outsider. An internal consultant realizes he/she will have to stay-on with the organization and work with peer workers upon completion of the internal consulting assignment. This is often the case within colleges of education, because the workers (especially tenure accruing positions) are typically less mobile than workers in many other types of occupations.

An external consultant can walk away from the organization after the contractual obligation is fulfilled. Therefore, the external consultant may chose to be more objective, controversial, and direct with his/her interactions with workers and management. The internal consultant may be more guarded with his/her assertions in fear of future reprisals by fellow workers or supervisors. Within the context of a college of education, this issue has special significance. Faculty members are likely to be long term employees who have histories and shared understandings with others in the college. Baggage issues prevail within colleges of education, and turf battles have been won and lost by faculty members over the years.

Both the internal consultant and the external consultant will have reasons for their reactions to a client situation. Lippitt and Lippitt (1977) noted that the internal consultant must deal with the challenge of gaining credibility within the organization. In some cases, the external consultant -- viewed as the "outside expert" -- begins the consulting assignment with ascribed respect. On the other hand, the external consultant may experience difficulty gaining entry to an organization, whereas entry to the organization should not be as troublesome for the internal consultant. The internal consultant might be confronted with demands of over-dependency from the organization, whereas the external consultant may prematurely finish his/her work with the organization without allowing sufficient continuity and follow-up work. For faculty members who might serve in an internal consulting role, they will most likely be expected to continue with their "normal" duties. In other words, teaching, research and service roles will continue for them as they try to function as change agents within a college of education.

Linking Internal and External Consultants

Perhaps the most effective consulting situation is the linking of internal and external consulting roles. Both internal and external consultants have unique advantages and barriers they face with each new assignment. Linking external and internal consultants in a team-consulting relationship may accentuate the advantages that each consultant can bring to a task. In this manner, the strengths and limitations of each consulting role can be acknowledged, dealt with, and strategies may be devised that capitalize on the capabilities of each role (Lippitt and Lippitt, 1984). Additional rationale for teaming-up internal and external consultants was provided by Blake and Mouton (1983):

> The internal consultant, knowing the situation more intimately than the external consultant, can aid the external consultant to gain insight as to what goes on in the organization. Thus, the external consultant's knowledge of the organization is deepened through the insight that can be made available to him or her by the internal consultant.
>
> By virtue of his or her continuity, the internal consultant can aid the organization through implementation of agreed-upon next steps. A third basis for collaboration is that the internal consultant may see important confrontations that need to take place, but by virtue of his or her position in the hierarchy, it is unsound to attempt such prescriptions or confrontations. Nonetheless, the internal consultant can create the conditions under which the external consultant can implement these interventions. In other words, the external consultant can often do work in levels of hierarchy that are off limits to the internal consultant. (565)

How might faculty members, functioning as internal consultants, be paired-up with an external consultant? This type of linkage may occur via several tactics (Lippitt and Lippitt, 1977, 140):

- Sometimes the internal consultant obtains the sanction to locate an external consultant and initiates the teamwork.
- Sometimes the external consultant identifies a potential collaborator inside the client system and initiates the invitation to team up.
- Sometimes the internal consultant leaves the employment of the client system but continues to serve from the outside as a consultant, using links to associates remaining inside the client system.
- Sometimes an outside consultant "moves in" for a while, as an adjunct staff member, with a temporary office and secretary.
- In a few cases, a wise administrator has asked his [sic] internal staff consultant to locate an external resource person who would best complement him or her with skills needed to provide the help required.

Strategies and Behaviors of the Internal Consultant

Whether functioning as an internal or external consultant, Reynolds and Nadler (1993, 15) explained the necessity for consultants to distance themselves from clients:

> Because of competence, experience, status, regulation, or a combination of these, the client views the consultant as capable of providing needed information, support, or help. The consultant is always external to the client system; i.e., the unit, group, or person seeking help. However, the consultant may be internal to the larger organization in which the client is an employee. Therefore, sometimes the consultant is a physical insider but always a psychological outsider. The power of the internal consultant, while influenced by the political or structural focus of the professional group or unit, is determined primarily by earned influence: Competence, ideas, acceptance, and one's role.

Along with the aforementioned earned influence, internal consultants must recognize the danger zones of the organizational chart. McDermott (1986) stressed that internal consultants must have skills at dealing with political issues and situations within the various levels of the organization. For faculty members who function as change agents, this means that they should acquire strategic knowledge of the college and the university, such as mission and vision statements, long and short range goals, characteristics of the organizational culture of the university, and so forth. This complex array of knowledge sets requires behaviors that will permit effective actions in a variety of contexts. Faculty members who focus on process consultation within a college of education will be attempting to help others solve problems rather than trying to provide the solutions themselves (Ovaice and Wentling, 1999). What actions might help faculty members in these endeavors? Adapted from the work of Swartz (1977), the following behaviors were suggested for internal consultants by Lippitt and Lippitt (1984):

- Behave like an external consultant. This requires a careful role clarification between consultant and client. In addition, a strong psychological contract characterized by mutual trust and openness is a must before entering any consulting relationship.
- Do some outside (external) consulting. Whether done for a fee or free, external experience can broaden the perspective, increase internal credibility, and increase consultant confidence. Outside experience provides an arena for experimentation. In some instances, it can provide a significant part of the financial security required to support the internal consultant when it is found appropriate to confront the internal client system.
- Be proactive and aggressive at least 25% of the time. It is important for the internal consultant to introduce ideas for change as well as to help clients respond to unplanned change. "Influence power" accrues to the consistent, responsible innovator.
- Focus on the job to be done. The internal consultant survives and grows in direct proportion to the client's effectiveness in getting the job done. All consulting activities - even career consulting - must focus on the job to be done and must use a results oriented approach.
- Be your own person. No one else owns you. No one manipulates you. No one can change you any more than you can change them. Be courageous, competent, skilled, diagnostic, and professional. (5.9)

A Collaborative Approach for Internal Consulting

Given that internal consultants and clients both operate with strengths and weaknesses, why not bring them together as a problem solving team that can help a college of education cope with change? Cash and Minter (1979, September) describe the differences between two common approaches for the provision of consulting. The process-consultation model utilizes group involvement and participation by members of the client organization. Stakeholders within the organization are involved in the diagnosis and problem solving stages of the consulting process. The consultant helps the client organization with the application of diagnostic tools, and the client organization helps to identify processes that need improvement.

Cash and Minter (1979) describe the doctor-patient model as one in which the consultant diagnoses the problems and also proposes solutions for the client organization. In this relationship, there is minimal involvement of the client organization in the consulting process. Each of the models described by Cash and Minter have advantages and disadvantages. Selecting one model over the other depends a great deal on contextual factors of the client organization. Perhaps most faculty members would advocate the process-consultation model, but this approach would make special demands on a college of education. The college might not have the fiscal resources, time or personnel to be partners in the consulting process. From an internal consulting perspective, the faculty member must be cognizant of the readiness and/or willingness of the college of education to use a participatory process.

Sherwood (1982) noted that a collaborative approach to consulting differed from more traditional approaches in three ways. First, in deciding the nature of the client's problem, the consultant works with the client to jointly ascertain problems confronting the organization. Second, assumptions are not made by the consultant regarding the quality of the available information. The client and consultant work together to determine the amount and kinds of information needed for the consulting process to be effective. Third, the reporting of conclusions and recommendations are not limited to the key stakeholders of the organization. Instead, the findings are shared with people who provided information and input during the data gathering stage. Sherwood cautions the internal consultant that one must continually clarify the expectations of the key stakeholders of the client organization. It must be made clear that the consultant is not the "all knowing expert." In other words, for the faculty member, he/she must continuously reaffirm this position and clarify expectations of the administration and other stakeholders within the college of education.

The issue of participation of stakeholders of a college of education is a critical point. Kirkpatrick (1985) noted that levels of acceptance or resistance to change within a work environment is related to the degree of participation in the intervention strategy. Workers are apt to resent a suggested change if they have not been asked for their input, especially if they believe they could have made a good contribution. Faculty members are certainly not different in this respect. On the other hand, employees who have been asked for their input are more likely to view the recommended changes more favorably. And, according to Kirkpatrick, it is not so much whether their ideas were implemented as part of the change. The key issue is involving personnel in the change process. Kirkpatrick (1985) identified three keys for managing change:

- Empathy
    - Know your people.
    - Know why some people resent/resist change while others accept/welcome it.
    - Anticipate how each person affected will react to a contemplated change.
- Communication
    - Let people know as far in advance as practical.
    - Provide the reasons "why" as well as the "what" and the "how."
    - Be sure they understand.
- Participation
    - Before a decision to change is final, get input from those involved.
    - Listen to them and carefully consider their opinions as well as the facts.
    - To the extent possible, use their input in making the decision.
    - If their input is not used, be sure to tell them why it wasn't used.
    - Give them credit. (256-257)

HRD professors, in particular, have a history of facilitating collaborative learning. These roles have included helping individuals work together, examine their progress, reflect on their actions, and make adjustments to their performance based on these reflections. Collaborative learning, as an example, is a popular learning strategy that HRD professors impart to their students.

How might HRD professors and graduate students increase and improve levels of peer participation in the change efforts of colleges of education? Empowered work teams, action learning groups, and knowledge and skill development as internal consultants can all contribute to improvements in peer participation. Most HRD professors have experience with these intervention methods. They must come forward with their skills, volunteer their talents, and become proactive participants in the change process.

Issues with the Internal Consulting Role

Faculty members will need to address some pressing concerns about their fit with an internal consulting role. This issue is probably more complicated for the internal consultant than for the external consultant. The internal consultant must not only address the technical skills required for the job, but also must recognize the political and ethical issues of taking on certain internal consulting assignments. And when it comes to organizational change, colleges of education are definitely laden with political minefields. Both internal and external consultants are apt to learn confidential information that has ramifications that reach far beyond the realms of his/her regular work assignment. Dyer (1984) alluded to this issue:

> The consultant is first and always an individual with values, habits, goals, attitudes, needs, and skills. Does this complexity of human attributes add up to the kind of person a client wants poking around in the organization? A consultant cannot help but be a role model for people in the client system

> watching how problems are uncovered and solved. The client would be well advised to gather data about the consultant regarding his or her personality as well as professional competence. Consultants who use the client to meet their own needs, whose values are not consistent with the values of the client system, who do not recognize their limitations, or who try to ingratiate themselves with clients rather than confront the issues probably do more harm than good. (184)

These points by Dyer are aligned with how Kellogg (1987) described the consulting/client relationship. She maintained that both internal and external consultants can improve the quality of their relationships with clients by focusing on three processes:

- The Matching Process. Is there a personal fit between the consultant and the client? Do the two have the same goals for the project? Are the consultant's skills well matched to the client's needs?
- The Contracting Process. Does the contract contain sufficient detail about what the consultant will do and what is expected of the client? Can the project be broken down into stages, so that a shorter-term project is contracted for first?
- The Communication Process. What can the consultant do to reduce the client's defensiveness? How can the consultant and client schedule more opportunities to talk with each other and to share information? (253)

Lippitt and Lippitt (1977) noted that regardless of the role played by the consultant, he/she will be struggling with decisions about the intervention and how to be most helpful. They noted the types of dilemmas that consultants often confront and offered the following queries as examples:

- Shall I question the client's formulation of the need for help?
- How can I stimulate awareness of a need for help which seems to be missing?
- How can I appropriately reduce "over-expectation" about what I can offer in the way of help?
- How can I call attention to the self-defeating use of power? (139)

Internal Consulting: Implications for Faculty Members

The purpose of this manuscript was to explore facets of internal consulting within organizations from a literature base that spanned several decades. Hopefully, the review of this literature can be helpful to faculty members of colleges of education who are engaged in college restructuring. Internal consultants must operate within a socio-technical system. A mechanistic approach, similar to following a recipe out of a cookbook will not serve the chaos and ill-structured problems that are commonplace in colleges of education. Faculty members, especially HRD professors who are well versed in serving the learning needs of individuals, recognize that real people and their working lives are effected by organizational change -- it is not just about the lines and boxes of an organizational chart.

Internal consultants walk an intervention tight-rope. On the one hand, the internal consultant must insure that stakeholders of the organization do not "look bad" in the change process. On the other hand, the internal consultant must not prostitute his/her own standards in the process. The range of issues on this tight rope are comparable to the issues addressed in the *AHRD Standards on Ethics and Integrity* (Burns et al., 1999). An internal consultant must strive for an optimum balance between involvement and detachment. This requires the internal consultant to make frequent checks of his/her own performance, skills and interactions in a client-centered yet self-restraining posture (Reynolds and Nadler, 1993).

Although they possess content knowledge that can help a college of education with its changes efforts, perhaps it should not be assumed that professors have sufficient consulting skills to be effective helpers. Colleges of education may need to plan and deliver consultancy skills training courses that would allow their internal knowledge to be released toward organizational change (Short, Collinson and Scrivener, 1999). Another approach might be to consider adapting a performance consulting model that might bring HRD professors and graduate students into a collaborative partnership with the college of education (Holton, Redmann, Edwards, and Fairchild, 1998). This type of formal arrangement might be best suited to apply the knowledge of HRD professors and graduate students in a way that is non-threatening to other college of education personnel. Much is at stake with the reorganization of colleges. The survival of HRD graduate and undergraduate programs is dependent upon the well being of the colleges within which they are housed.

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Communication in the Workplace: Using Myers-Briggs to Build Communication Effectiveness

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This paper presents a study examining communication type and communication satisfaction between an organization's supervisors and their subordinates, facilitated by the Myers-Briggs Type Indicator (MBTI) and MBTI workshops. Satisfaction was measured by the Communication Assessment Instrument (CAI). The unexpected findings may be explained by the design and methods used in the study. Results do suggest there may be a relationship between length of time employed and employee's satisfaction with communication between supervisors and their peers.

Key Words: Workplace Communication, MBTI, Management

Interactive communication is an essential ingredient for an effective, successful organization (Schein, 1997). The ability of companies to survive the technological, global and ethical turmoil today is linked to the effective communication of the employees and visionary leaders (Kroeger, 1992; Sashkin, 1995).

While there are not a lot of instruments to measure effective communication, one of the most often used is the Myers-Briggs Type Indicator (MBTI). "The Myers-Briggs Indicator personality inventory is one of the most popular self-report instruments in leadership and management development programs; in communications training; and in other organizational development training in the United States and around the world" (Fitzgerald & Kirby, 1997). MBTI has been used for more than forty years by organizations who want their employees to communicate better (Kroeger, 1992). Unfortunately, 99% of the people that attend an MBTI workshop seldom receive information on how to apply the information in the workplace. In other words, no transfer of learning occurs from the workshop to the workplace (Coe, 1992).

Statement of the Problem and Theoretical Framework

The lack of workplace application has been experienced by one member of this research team (Ms. X). Her organization regularly administers the MBTI as part of its training program. Unfortunately, no explanation is provided to the employees as to how to use the information when they return to their work environment. As a result, the value and benefit of the material is lost; and, the company incurs a significant cost in training and employee time.

Approximately 10 years ago, Ms. X recognized the benefits of MBTI as a communication tool, especially in the workplace, as evidenced by the perception of employees who prefer to work alone rather than in a group; the data gathering patterns of a detail-oriented person versus the sixth sense or probabilities patterns of an intuitive person; or, the decision-making process of an individual who stoically follows a set procedure rather than being concerned about the impact the decision will have on others. Ms. X wanted to move her work unit from MBTI theory to application in the work environment.

When people differ in communication style, knowledge of Type lessens friction and eases strain in any work setting. Isabel Briggs Myers posited that using Type in communication breaks down these barriers (Myers, 1980). For example, people with opposite type differences work side-by-side and often wonder why they have trouble communicating with each other. "T's" use logic to arrive at definitive opinions without paying much attention to their or others' feelings. When a "T" type disagrees with an "F" type, the "T" type may be so forceful and blunt that the "F" type feels attacked because an "F" type prizes harmony and would rather agree than disagree with others. This makes agreement or cooperation almost impossible (Myers, 1980).

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In another example, an "N" type speaking to an "S" type must state up front what he/she is talking about. The "N" type has a tendency to start in the middle of a conversation, to leave sentences unfinished, and to change the subject frequently. On the other hand, an "S" type deals with facts which can be boring and restricted for an "N" type (Myers, 1980).

Myers (1980) states, "Sensing [S] types want the solution to be workable; thinkers [T] want it systematic; feeling [F] types want it humanly agreeable, and intuitives [I] want a door left open for growth and improvement."

A relationship-centered workplace requires that all employees understand those around them so that they can connect quickly and intensely to solve problems (Kroeger, 1992). Using the MBTI concept, Ms. X has incorporated the MBTI into her repertoire of management tools and administers the instrument to all new employees entering her department. Ms. X builds workshops into her staff meetings that help address real and potential problem areas in the workplace (e.g., interpersonal skills, problem solving, diversity, and specific work-related issues). In addition, she applies the theory in the day-to-day activities of her employees - including the presentation of a work problem and possible solutions, review of recommendations from an external group for system or process changes, and brainstorming ideas with subordinates. Ms. X reported that no other type of communication workshop was provided in the workplace.

There are two reasons why this research study is of interest to the researchers. First, Ms. X's interest area is working with managers to help them become better facilitators of learning in the workplace. Ms. X wants to determine whether the MBTI is one of the tools managers should know and use in the work setting for effective communication flow given that communication with employees is one of the first steps in facilitating learning. Second, and for benefit to the behavioral sciences, this research study may determine whether or not managers should use MBTI as a tool to determine communication styles in the workplace and provide training in its uses in order to help their work units and, ultimately, their organization be effective and successful.

Definition of Terms

Effective communication as defined in this study is indicated by a high total score on the CAI for the experimental and control groups. The high total score is an indicator of a high level of satisfaction with communication in the workplace. That is, if you are satisfied, communication is effective in the workplace.

Purpose

The purpose of this study is to determine whether incorporating effective communication training based on the Myers-Briggs Type Indicator is an effective technique to enhance communication satisfaction between a manager and subordinates. Specifically, this research study will determine whether subordinates who participate in periodic MBTI exercises are more satisfied with the communication in their department than subordinates who do not receive similar MBTI information.

Variables

The dependent variables are the scores from each of the subsections in the instrument (conveying information, channels of communication, written communication, oral communication, and quality of team communication) and the experimental and control groups' total score. The independent variable is MBTI usage. The categorical variables are length of time in department, level of education, ethnicity, gender, and MBTI profile.

Research Questions and Hypotheses

The research question investigated in this study was: Does incorporating effective communication training based on the MBTI increase communication satisfaction between a senior manager and subordinates? The researchers hypothesize that the awareness of one's communication style and use of effective communication techniques based upon the MBTI will have a positive affect on a senior manager-subordinate relationship.

Methodology

Design

The researchers used an experimental, static-group comparison design to examine the outcomes of incorporating effective communication training based on the MBTI. In the static-group comparison design, two already existing, or intact, groups are used, and comparisons are made between the groups receiving different treatments. Although this design provides better control over history, maturation, testing, and regression threats, it is more vulnerable to mortality, location and differential subject characteristics (Fraenkel & Wallen, 1996).

Participants

Participants in the experimental group currently work at a Fortune 100 company in a direct revenue stream department. The control group participants in this study work for the same Fortune 100 company but in a different location. Participants in the experimental group are supervised by Ms. X. The employees were given the MBTI when they first went to work for her. Basic MBTI information was presented to the subordinates at the time the instrument was administered. Every employee, except one, has participated in at least one workshop with Ms. X using MBTI information. The purpose of the workshop was for the subordinates to learn how to increase effective communication with their colleagues and senior manager by utilizing MBTI's Type information. It was an attempt to help the experimental group's participants apply the learning in the workplace so they could move from theory to action.

During the workshops, pre-selected groups worked through a series of situations that highlighted different preferences used in communicating in the workplace. After each group completed the activity, a discussion was held to review the outcomes and discuss how they related to the interactions the subordinates encountered everyday. In addition, individual exchanges about using the MBTI preferences often occurred between the subordinate and senior manager, especially when a decision was required and the subordinate was presenting collected data. Of the 20 people who work in this department, 19 (13 females, 6 males) participated in this pilot study; one member was unavailable to participate.

Members of the control group are supervised by Mr. Y. None of the employees were given the MBTI when they first went to work for him, although three employees had taken the MBTI during their careers. None of the control group members have participated in a workshop with Mr. Y using MBTI information. Of the 62 people who work in this department, 14 (2 females, 12 males) participated in this pilot study.

Complete demographic information of the two groups is provided in Table 1 below and illustrates that the study's sample represents a heterogeneous group. While the sample was a purposive sample, their selection was based not only on their availability, but also on the appropriateness of collecting data on them given the goals of this research study (Fraenkel & Wallen, 1996).

TABLE 1. PARTICIPANT DEMOGRAPHICS

VARIABLES	CONTROL GROUP	EXPERIMENTAL GROUP
Gender	Males - 12	Males - 5
	Females - 2	Females - 14
Ethnicity	Caucasian - 11	Caucasian -10
	African-American - 1	African-American - 9
	Other - 1	Other - 0
Length of Time in Department	Less than two years - 11	Less than two years - 7
	Two years or more - 3	Two years or more - 10
		No response - 2
Level of Education	Less than four-year degree - 3	Less than four-year degree - 5
	Four-year degree or more - 11	Four-year degree or more - 12
		No response - 2
Number of MBTI Workshops attended	None - 11	None - 1
	One to Three - 3	One to Three - 8
	Four to Six - 0	Four to Six - 3
	More than Six - 0	More than Six - 5
		Missing - 2

Instrumentation

Two instruments were used in the study. The first instrument was the MBTI. The instrument's reliability and validity follow this section. The second instrument, the Communications Assessment Instrument (CAI), was adapted for this study (Scanlon, 1999). It was based on the Corporate Communication Assessment (CCA) which was developed by Dr. Thomas Watson in 1985 and based on the Corporate Communication Audit (Audit). The Audit, a measurement system and procedure for studying organizational communication, is a nationally standardized instrument. It was developed over a five-year period in the 1970s by the International Communication Association. A team of more than 100 communication professionals from business and academia developed the instrument (Watson, 1997, p. 4). The CCA has been used in approximately 50 organizations, including all types of industry (public vs. private) in both large and small companies (Watson, 1997, p.4).

The CAI, the instrument used in this pilot study, is a Likert-type scale survey (e.g. strongly agree to strongly disagree) composed of a subset of modified questions from the CCA. While the CCA measures the effectiveness of nine different dimensions of organizational communication, the CAI only focuses on five dimensions (i.e., subsections) of senior manager-subordinate communication. The instrument consists of 29 statements, separated into their respective subsection. Because the CCA was modified for the purpose of this study, its reliability and validity might have been distorted (Creswell, 1994). Therefore, we attempted to reestablish the reliability and validity for the CAI. Our efforts are described below.

Reliability and Validity of the MBTI

The internal consistency reliabilities are estimated by coefficient alphas, which are interpreted similar to Pearson's r. The reliabilities are shown in the table below:

Internal Consistency				
Gender	EI	SN	TF	JP
All	.83	.83	.76	.80

The test-retest consistency reliability estimates are shown in the table below:

Test-Retest Continuous Scores				
Gender	EI	SN	TF	JP
Male	.79	.84	.48	.63
Female	.86	.87	.87	.80

Construct validity is shown in Type tables themselves; and criterion validity is concurrent. Finally, Ms. X is qualified to administer the MBTI, having received full certification as an instructor and interpreter of the MBTI in 1991.

Reliability and Validity of the CAI

The CCA's reliability and validity data were first reported in *Auditing Organizational Communication Systems: The ICA*. "The primary criteria in developing the CCA were face validity and factor analysis....The published data demonstrated the Audit's broad application to a variety of organizational cultures" (Watson, 1997, p. 4).

The CAI was used to assess participants' satisfaction with communication between themselves and their respective supervisors. The original CAI was field-tested on 12 doctoral students and reviewed by three research experts, all Ph.D.s and faculty members at a large research university. Cronbach alphas were run on all five subsections of the CAI and on the total instrument. The scores were .85 for conveying information; .85 for channels of communication; .87 for written communication; .88 for oral communication; .75 for quality of team communication; and, .94 for total instrument. These numbers suggest a strong, reliable instrument for this pilot study. Unfortunately, due to time constraints on the study, we were not able to test for validity (i.e., content, construct, predictive). However, comments from the three research experts regarding clarity, appropriateness, and relevance of the survey items coupled with the demonstrated reliability and validity of the CCA (Watkins, 1997), suggest face validity for the CAI.

Data Collection Procedures

Two of the four researchers administered the CAI to the experimental group at its work site and to the control group at its work site. All participants in the experimental group completed the CAI at the same time. However, control group participants completed the CAI during the lunch hour at a time convenient to them. In addition, the control group member's senior manager made several appeals during the lunch hour for his staff to participate in the study.

In order to ensure accurate responses on the surveys, ones that truly reflected how each participant felt about each question, the participants completed the surveys anonymously. Each survey was coded and demographic information was only used for data analyses. It should also be noted that Ms. X was not involved in administering, scoring or analyzing the surveys. These procedures, in addition to the prepared script mentioned above, are measures to control for potential bias in implementing the instrument and analyzing the data.

Although the researchers attempted to control for possible attitudinal threat (participant attitude), a weakness of the study is the fact that a relationship exists between the experimental group and Ms. X. Thus, the possibility exists that the participants' scores may not have accurately reflected their satisfaction with senior manager-subordinate communication and may have produced unintended effects.

Data Analysis

Each participants' instrument was scored using a one to five scale, with one indicating very dissatisfied (never) and five indicating very satisfied (always). An average score on each subsection and an average total score was then generated for each participant. Independent sample t-tests were run to look for significant differences between the means of the experimental and control groups. Pearson r correlations were run on variables the researchers hypothesized would have a significant relationship with total communication score. One-way analyses of variance (ANOVAs) were used to look for significant differences for the following variables: MBTI profile type, ethnicity, and education level.

Differences between mean scores of genders were examined by running independent sample t-tests. An analysis of covariance (ANCOVA) using length of time as the covariate was also run to see if the number of MBTI workshops attended or MBTI profile type had an effect on total communication score.

Results and Findings

Independent sample t-tests were run on total communication score and scores of all subsections of the CAI. The purpose of the t-tests was to determine whether there were significant differences between the means of experimental and control groups in any of the subsections and/or total communication score. The group of t-tests showed there were no significant differences between the control and experimental groups' means on total communication score (mean of control group is 4.22; mean of experimental group is 4.15); and, the only subsection which had a significant difference in means between the two group's means was oral communication (mean of control group is 4.42; mean of experimental group is 4.02), $\underline{t}(31)= 2.406$, $p=.022$ or less than .05. The results of these t-tests did not support our hypothesis.

Therefore, Pearson correlations were run to determine whether any significant relationships existed between any of the variables and total communication score. There were no significant correlations between the number of MBTI workshops a person had attended and his/her total communication score. The next group of correlations was run between length of time in the department and total communication score. No significant correlation existed for the experimental group; however, for the control group, there is a significant negative correlation, $\underline{r} = -.558$, $p. <.05$, indicating that the longer a person stays in his/her department, his/her total communication score decreases. Further, when we looked at r , we saw that 31% of variation in the mean scores on total communication could be attributable to length of time in department.

To determine whether there were any significant differences between the MBTI profile types in all of the subsections and the total communication score, one-way ANOVAS were run for both the control and experimental groups. The test results for the control group showed no significant F values; thus, indicating no significant differences between the MBTI profile types and the participants' communication scores. However, the test results for the experimental group showed one significant F value in the quality of team communication subsection ($\underline{F}(8,9) = 3.741$, $p. <.05$) indicating there was a significant difference between MBTI profile types. Post-hoc tests could not be performed because some cells included fewer than two people. Because the number of people in some of the MBTI profile types was so small, we did not think it was worthwhile to perform independent sample t-tests between the different types to try to determine the exact location of the differences.

One-way ANOVAs were also run for both the control and experimental groups to determine whether there were any significant differences between mean subsection scores and the means of total communication score based on ethnicity or education level. There were no significant results as shown in Table 2 below:

Table 2.
One-way ANOVAs

			MBTI Profile					Ethnic Group					Level of Education				
Grand Total			Sum of Square	df	Mean Square	F	Sig.	Sum of Square	df	Mean Square	F	Sig	Sum of Square	df	Mean Square	F	Sig
Communication Score	Control Group	Between Groups	.573	3	.191	.781	.531	.703	2	.352	1.669	.233	.543	3	.181	.731	.557
	Control Group	Within Groups	2.447	10	.245			2.317	11	.211			2.477	10	.248		
Total			3.020	13				3.020	13				3.020	13			
	Experimental Group	Between Groups	1.508	8	.189	.706	.683	.114	1	.114	.452	.511	.470	3	.157	.593	.630
	Experimental Group	Within Groups	2.404	9	.267			3.784	15	.252			3.428	13	.264		
Total			3.912	17				3.898	16				3.898	16			

Independent sample t-tests were then run for both the control and experimental groups to determine whether there were significant differences between genders in the means of any subsection scores or the means of total communication score. In the control group, there were no significant differences in mean scores between genders. In the experimental group, there was only one significant result. The significant difference in means appeared in the quality of team communication subsection where the mean of the males (mean is 4.61) was significantly greater than the mean of the females (mean is 4.19) with $t(16) = -2.144$, $p < .048$.

Because length of time in the department was found to have a significant relationship with total communication score in the control group, and the two groups were not matched on this variable, an ANCOVA was run using length of time as the covariate. With length of time removed as the covariate, we wanted to determine whether the number of workshops attended or the person's MBTI type would have a significant effect on our dependent variable, the total communication score. The results, shown in Table 2 below, indicated that length of time in the department did have a significant effect, $F(1) = 5.379$, $p < .05$. However, even when using length of time as a covariate, neither the number of workshops a person attended nor his/her MBTI profile type have a significant effect on the participants' total communication scores.

Table 3
Tests of Between-Subjects Effects Dependent Variable: grand total communication score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.286	20	.264	1.453	.303
Corrected Model	5.286	20	.264	1.453	.303
Intercept	36.617	1	36.617	201.250	.000
Intercept	36.617	1	36.617	201.250	.000
TIME	.979	1	.979	5.379	.049
TIME	.979	1	.979	5.379	.049
MBTIP	1.606	8	.201	1.104	.446
MBTIP	1.606	8	.201	1.104	.446
WORKSHP	2.704	7	.386	2.123	.157
WORKSHP	2.704	7	.386	2.123	.157
MBTIP * WORKSHP	.417	3	.139	.765	.545
MBTIP * WORKSHP	.417	3	.139	.765	.545
Error	1.456	8	.182		
Error	1.456	8	.182		
Total	511.971	29			
Total	511.971	29			
Corrected Total	6.742	28			
Corrected Total	6.742	28			

a. R Squared = .784 (Adjusted R Squared = .244)

Discussion

This study was prompted by the question: Does incorporating effective communication training based on the MBTI increase communication satisfaction between a senior manager and subordinates? The importance of the question stemmed from the potential benefits of the MBTI as a communication tool in the workplace. As Myers (1980) posited, using Type may facilitate effective communication. While it is unrealistic to change existing practice or implement new practice methods based solely on the findings in this study because of its exploratory nature and design; several observations, suggestions and areas for consideration can be made for future research.

Our initial results indicated that our hypothesis was not supported. It appears there is no difference between a group of employees who have not used their MBTI profile type knowledge nor those who have. There were no significant differences on all but one subsection (oral communication). In this instance the mean score of the control group was actually significantly higher than that of the experimental group.

These unexpected findings influenced the research team's decision to run correlations between some of the variables on which the control and experimental group were not homogenous and between the total communication scores. The findings indicate there is no relationship between the number of MBTI workshops a person attends and his/her satisfaction with communication. This result should be interpreted with caution because several members of the experimental group reported they had not attended MBTI workshops. According to Ms. X's statements before and after the instrument was administered, she does at least three trainings per year with the employees in her department. Therefore, one confound of the experiment is the use of the word "workshop," which may not have been clearly understood by the participants in the experimental group. Thus, the word should be clearly defined in future research studies.

In instances where a participant did not indicate the number of MBTI workshops he/she attended or indicated zero, the data was adjusted to indicate three for every year he/she had been in the department. If a participant did not indicate how many years he/she had worked in the department, we were unable to indicate the number of MBTI workshops attended. These issues lead us to believe the finding of no relationship between number of MBTI workshops attended and level of satisfaction with communication should be looked at further in future studies. These studies should clearly define the word "workshop" on the survey when collecting demographic information.

The finding in the control group was that the longer a person stays in his/her department, his/her total communication score decreases. Since 78.6% of the participants in the control group had been in the department one year to less than two years, we felt that perhaps this would account for their communication scores in all the subsections and total communication score being higher than we expected. We believe that when new employees join an organization, they generally receive a vast amount of direction and feedback. Consequently, they are usually satisfied with senior manager-subordinate communication during this initial period.

In the experimental group, the length of time in the department is more dispersed, with the average being just over three years. It is likely that these individuals' scores are, therefore, more representative of actual satisfaction with communication.

As length of time in the department was found to have a significant relationship with total communication score in the control group and the fact that the two groups were not homogenous, we ran an ANCOVA using length of time as the covariate. Our results indicated that length of time in the department does have a significant effect on one's level of satisfaction with communication. However, our hypothesis that with length of time removed, the number of workshops one attended or one's MBTI profile type would have also had an effect was not supported.

Based upon the results of the ANOVA's, there appears to be no difference in level of satisfaction with senior manager-subordinate communication based on either one's ethnicity or education level. As far as differences between MBTI profile types and a participant's level of satisfaction with communication, the results of all the tests run only indicate there are differences in the subsection of quality of team communication. While these results indicate that one's MBTI profile type may have an effect on the area of quality of team communication, we do not want to advocate the idea that certain types of people should only work with certain types of people (e.g., ISTJ vs. ENFP). When future research is done in this area using a larger sample size (which would allow for post-hoc comparisons to be done if a significant difference is found between two or more profile types), we caution this interpretation of the results.

Our results also indicate there may be some difference in gender and level of satisfaction with senior manager-subordinate communication. However, we only found significant differences in one subsection for the experimental group. As there was no significant difference between males and females in either group on the overall level of satisfaction with communication and because our sample size was relatively small (n = 19 for experimental group, n = 14 for control group), we are hesitant to make generalizations based upon these preliminary findings.

Limitations

Our findings should be viewed with caution due to the dissimilarity in the control and experimental group (i.e., lack of homogeneity) and the small sample size. Future studies should attempt to better match comparison groups, thereby possibly producing more generalizable results. Additionally, statistical analysis is more difficult (e.g., post hoc comparisons) with a small sample size and also affects the generalizability of the findings.

Second, use of a purposive sample made controlling for a location threat difficult. For example, the groups received the questionnaires at different locations and at different times. The experimental group participants received the questionnaire as a unit at the same designated time and in the same designated room. On the other hand, the control group participants received the questionnaire at different times over the course of their lunch hour. Consequently, the researchers were unable to rule out the potential for unintended effects of location when the CAI was administered.

Third, although we believe the responses on the CAI questionnaire were accurate, the fact that the experimental group was directly associated with one of the researchers may have also produce an unintended effect and, thus, had an effect on the outcome of the study.

Finally, a potential bias may exist within the control group for employees who have been with the company for less than two years. Specifically, demographic data show retention rates are very low in the control group (i.e., approximately 90% turnover within a two-year period) and very high in the experimental group (i.e., 5% turnover within a two-year period). Further, only 14 out of 62 control group subjects participated in the study versus 19 out of 20 in the experimental group. We believe that the lack of full participation within the control group can also introduce bias if those subjects who did not participate in the study were to respond differently from those subjects from whom data were obtained.

Conclusions and Recommendations

The unexpected findings of this study may be partially accounted for by the small sample size and the lack of homogeneity between the control group and experimental group. However, we think additional research needs to be conducted which further investigates our original hypothesis while eliminating the threats to validity in this study. To better control or minimize the possible effect of these threats, future researchers should obtain more information on subjects that may potentially participate in the study (i.e. language used in the workplace should be similar to that used on the questionnaire - exercise versus workshop); attempt to have a matched control and experimental group; increase the sample size to facilitate data analysis; and standardize the conditions of the study so that location and administration of instruments are consistent for both groups.

Implications for HRD

Even though the findings in the study did not come out the way we hypothesized, the researchers believe there may be positive implications for organizations when managers use the MBTI as a communication tool. This practice is a new application of HRD theory in the management arena and additional research should be conducted on this topic.

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An Analysis Using Houle's Typology of Learner Orientation and Selected Variables in Predicting Student Persistence in a Two-year Proprietary Technical College

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The longitudinal study was conducted to determine (1) if a profile exists for students who persist in college; (2) the utility of this profile in predicting student persistence; and, (3) if a relationship exists between student persistence and the selected variables of learner orientation, income level, race, gender, high school graduation status, and college entrance exam scores. The Learner Profile Questionnaire and educational records of 468 participating students were used in this multivariate, correlational research study.

Keywords: Persistence, Houle, proprietary.

Post-secondary proprietary education has grown over the last five years into a multi-billion dollar a year business with approximately 1.5 million students enrolled (The Institute for Higher Education Policy, 1996). The rapidly expanding technology-based segment of the economy has placed a demand on the workforce for skilled and technologically competent workers that cannot be met by traditional public and private colleges and universities. For-profit corporations, or proprietary schools, have exploited this shortcoming and have begun to expand their course offerings and modes of delivery. Vital to the proprietary schools' continued success is their (1) understanding of the personnel and skill requirements of business and industry and (2) the factors that contribute to students successfully completing their programs. In fact, proprietary schools are unique among post-secondary institutions in their dual need to meet the demands of the workplace, while insuring learner success and satisfaction.

In 1961 Cyril O. Houle posited that the reason adults are motivated to participate in learning is a reflection of their learner orientation: activity-oriented, goal-oriented, or learning-oriented. Almost four decades ago, Houle observed that because the United States was an industrial society with strongly materialistic values, many drew the conclusion that people enroll in vocational/technical courses solely for the purpose of making money. Those schools hoping to expand their influence built up more vocational programs primarily by emphasizing the goal-oriented perspective of learning. Proprietary schools today appear to agree with this financially based, goal-oriented motivation as evidenced by the strong emphasis placed on job placement in their advertising. Houle's work suggests, however, that a significant number of adults may be motivated by factors other than simply the goal-oriented objectives of jobs or money when they enroll in proprietary institutions. To increase enrollments and improve persistence, a more complete understanding of student motivation and other related factors that might affect a student's decision to remain in school is necessary. While much work has been done over the years on student persistence, the recent rapid growth of the post-secondary proprietary sector provides a means to investigate the characteristics of the students who select and persist in this educational environment. Toward this end, this study seeks to determine: (1) if a particular profile exists for students who successfully persist in their program of study; (2) the utility of this profile in predicting a student's persistence at a two-year technical proprietary school; and, (3) if a relationship exists between a student's persistence and the selected variables of learner orientation, income level, race, gender, high school graduation status, and college entrance exam scores.

Significance of the Study

This study is important in several ways. First, it continues to clarify the potential for Houle's learner orientation typology, developed almost forty years ago, as a tool for better understanding the learning needs of adults. Highly productive in stimulating research, Houle's typology offers a useful framework for analyzing adult motives for continuing their education (Cross, 1981).

Second, the resulting profile will assist employers in industry attract and retain highly skilled technology workers, a challenge made all the more difficult given the strong demand for these professionals and their relative few numbers. A study conducted by Virginia Tech estimates that 346,000 computer-programmer and systems analysts jobs are vacant in companies employing more than 100 workers. This nationwide study communicates serious implications for corporations in need of these employees, as well as the colleges and universities who educate information technology professionals (Selingo, 1998). Another study conducted by the Information Technology

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Association of America produced a similar finding. In a survey of 2,000 large and mid-sized companies, 190,000 vacant information-technology positions were identified. One cause of the problem, according to nearly two-thirds of the companies surveyed, is the declining number of college graduates with the necessary technical skills. From 1986 to 1994, the number of bachelor's degrees in computer science awarded annually dropped by 43% to 24,000 (Blumenstyk, 1997).

Third, these findings will inform educators and trainers in industry, helping them understand what motivates adults, once enrolled, to persist in their educational endeavors. Corporate training officers and proprietary school owners and administrators share similar experiences as they design their programs. As organizations establish "corporate universities" and develop course offerings and learning experiences, they are required to operate on, at minimum, a revenue neutral basis. As with the for-profit schools, the corporate training department must meet organizational and student needs and demands. This means they are confronting the same pressures to attract students and provide a comprehensive, yet cost-effective, experience as are proprietary schools. In fact, proprietary schools have become the models for corporate training programs and, more recently, for on-line courses offered by colleges and universities (Carnevale, 1999).

Despite the numerous studies aimed at solving the problem of student attrition in colleges and universities, overall rates of non-completion have remained relatively constant over the last fifty years. That is to say, 40-50% of all students who begin a college program will fail to complete it (Summerskill, 1962; Astin, 1972; Bean, 1980; Tinto, 1985; U.S. Department of Education, 1996). Tinto (1998) later admitted that college retention programs had limited influence, partly because the educational community is not sufficiently modifying academic or organizational processes in response to study findings to improve student retention. However, educators are increasingly being held to task by state legislatures seeking greater return on their higher education budget investment. Among other evaluative criteria, legislators and their constituents consider graduation rates a reasonable measure of a college's effectiveness when performance-based appropriations are meted out each fiscal year (Carnevale, A., Johnson, N., & Edwards, A., 1998). This profit incentive has long been appreciated by the proprietary sector who are prohibited by law from receiving federal or state assistance directly. The for-profit institutions must operate solely on the basis of tuition revenue, fees, and sale of books, all of which are directly related to census and student retention. Though this study examines persistence in a proprietary setting, its implications are indeed far-reaching as public colleges and universities are being expected to improve their outcomes in areas such as completion and job placement rates, once considered primarily the domain of proprietary education.

Tinto (1975) recognized that future research was needed to look at the dropout process and advocated longitudinal studies rather than those employing cross-sectional data. He recommended that persistence studies be based on following entering cohorts in various types of institutions of higher education. Such studies, he suggested, will lead to meaningful comparative analyses of institutional impacts upon dropout behaviors. This study intends to add to the extant limited body of knowledge of student persistence in proprietary schools by examining student motivation for learning at the time of enrollment using Houle's typology of learner orientation and joining it with the economic, demographic, and background characteristics identified through a study of Tinto's model of persistence and subsequent studies of enrolled college students.

Review of the Literature

A review of the literature begins with an examination of Houle's (1961) work as defined in his book, *The Inquiring Mind: A Study of the Adult Who Continues to Learn*. In this qualitative study of 22 individuals conducted through in-depth interviews, Houle hoped to identify behavioral patterns that would help to explain what was meant by continuing education. He interviewed twelve men and ten women who lived within a 75-mile radius of Chicago. The interviews were structured around 19 major questions and several sub-questions that were added as necessary to develop the responses. Of the 22, 21 were white and one was black. Levels of education ranged from those with less than an eighth grade education to those who had reported pursuing advanced studies. Similarities were noted among the subjects relative to goals, level of enjoyment during the learning process, and the general worth of their continuing education. However similar in these aspects, differences were noted regarding the purposes and values of their learning endeavors. Houle theorized that three subgroups were present within the group of 22.

The first group he categorized as *goal-oriented* learners. These highly practical individuals are directed toward accomplishment of well-defined objectives. For this group, the purpose always comes first. The means is then chosen based on its suitability toward achieving the selected goal. The stimuli for commencing a learning episode is most often external (job promotion, career change) and the duration of their continuing education effort is determined by the time it takes to reach the stated objective. Once the immediate objective is reached, the goal-oriented learner stops, having satisfied his need for learning. This is in contrast to the second group identified by Houle, that of the *activity-oriented* learner (Houle, 1961).

Activity-oriented individuals find meaning in the activity of the learning itself independent of the subject being studied. Among the many reasons cited by them for taking part in learning activities are loneliness, escape from personal problems, desire for credentials (diplomas, degrees, certificates) without ever putting them toward a practical use, the perceived need to carry on a family tradition of scholarship, and an apparent desire to remain engaged in educational pursuits beyond the point where the efforts retain any significance or meaning. For this group, social contact was the draw and continuing education a legitimate means to that end (Houle, 1961).

The third group Houle identified were those he considered *learning-oriented*. At the center of their educational efforts is the desire to know. To satisfy this quest for knowledge it is not necessary that they participate in formal education as may be required of the certificate-driven goal-oriented group. Their behavior is instead characterized by a preoccupation with learning and a continuity of learning activity that serves as the foundation of their participation in continuing education regardless of the subject being studied at any given time. During their interviews, several of this group readily admitted that they do it for fun (Houle, 1961).

Houle concludes that although the orientations of the individuals described in his study may differ, they share the common characteristic of being continuing learners. The differences that do exist among them are related to the preferred approach they take in their learning endeavors and no one orientation is better than the other. The usefulness of the study, according to Houle, is in understanding and guiding education (Houle, 1961).

Houle's insightful work prompted considerable research concerned with motivational orientation of adults. Morstain & Smart (1974) and Boshier and Collins (1983) reached the conclusion that Houle's three-factor typology, while a very useful starting point, can no longer be considered adequate. The researchers reported the existence of additional factors affecting motivation of adult learners.

Cyril Houle and those who have conducted similar studies of adult motivation for learning were primarily concerned with why adults choose to participate in education. Another substantial body of literature exists to attempt to answer the question why adults persist in their educational pursuits once they have begun them. It is proper to begin such a review with a discussion of Vincent Tinto's (1975) Model of Student Departure which has become one of the most widely accepted and used designs to analyze student attrition.

Tinto's model, which has as its foundation the concepts of social and academic integration, identifies five sets of variables and their effect on student persistence. These variables include: individual characteristics (family background, ability levels, sex, age, and past experiences); initial commitments (to the goal of completion relative to career plans and commitment to the institution itself as a means to that end); academic integration and developed goal attainment (grade point average, grades, and faculty interactions related to student performance); social integration and developed institutional commitment (interpersonal relationships and intellectual development); and institutional characteristics (extracurricular activities, faculty interactions) (Tinto, 1975).

According to Tinto, a student's success in college is dependent upon the ability to become integrated into the college environment. His model considers persistence primarily as a function of the quality of a student's interaction with the academic and social systems of the college. The individual characteristics and background traits that Tinto identified as having an effect on student persistence influence how a student will interact with the institution's social and academic systems and will also affect the level of integration attained. In other words, the greater the student's level of social and academic integration, the greater the probability that he or she will remain in college (Tinto, 1975). Although the primary cause of departure may often be identified, its effect on the individual's decision to leave rarely exists in isolation of the others (Tinto, 1987).

Several validation studies have been done of Tinto's model (Terenzini & Pascarella, 1977; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1991). The majority of the studies focused on students in four-year, residential institutions. However, Pascarella, Duby, and Iverson (1983) applied Tinto's model to non-residential students in commuter institutions. In this study, the researchers found that non-residential student pre-enrollment variables not only influence integration with the academic and social systems of the institution, but directly affect persistence. This finding contrasts with Tinto's model which holds pre-enrollment variables (family background, ability levels, sex, age, and past experiences) as being determinants of a student's interaction with the institutional systems, but only indirectly affecting persistence.

The variables of income level, race, gender, high school graduation status, and college entrance exam scores used in this study were chosen based on this review of the literature. Within this body of knowledge, there is general agreement that income level as a factor of socio-economic status affects student persistence. In fact, there is considerable evidence to support the position that income level and socio-economic status are the second best predictors of student persistence after high school performance is considered (Summerskill, 1962; Lewis, 1995, Horn & Premo, 1995). The use of race and gender as predictor variables in determining college persistence has been included in a number of studies with mixed findings. When race is considered, findings point to higher completion rates for Asians and whites and correspondingly lower rates for Hispanics and African-Americans (Tinto, 1987; St. John, Starkey, Paulsen, & Mdaduagha, 1995; U.S. Department of Education, 1996). When gender is considered, findings show that men persist at a higher rate than women; however, the more recent studies report a narrowing of this gap (Spady, 1970; Astin, 1972; Pascarella & Terenzini, 1983; U.S. Department of Education, 1995). Performance in high school, as measured by grade point average, class standing, or achievement on standardized entrance exams, has been shown to be the single best predictor of future college performance. The current furor of the legitimacy of standardized tests notwithstanding, achievement tests by their design and purpose have been found to be valid predictors of students' college performance (Tinto, 1975; Pascarella and Terrenzini, 1991; Hanson & Swann, 1993; American College Testing, 1998).

Methodology

A non-experimental, multivariate correlational, descriptive research design is used in this longitudinal study. This design is consistent with the research problem and the purpose of the study. Since the intent of this study is to determine the characteristics that may be used to predict a student's persistence, the correlational method has been chosen. The intent of the research design is to conduct a longitudinal study of entering cohorts at one type of institution, as recommended by Tinto. The findings of this study may then be compared to those studies of other type institutions when conducting an analysis of institutional impacts upon dropout behaviors (Tinto, 1975).

Research Questions

1. Do students who successfully persist in their program of study fit a particular profile?
2. Can this profile be used to predict a student's likelihood of successfully persisting in a specified program at a two-year technical proprietary school?
3. Is there a relationship between a student's persistence and the selected independent variables of learner orientation, income level, race, gender, high school graduation status, and college entrance exam scores?

Hypotheses

Ho: There are no predictors of student persistence.

Ha: Students who are goal-oriented complete at a higher rate than do those who are not goal-oriented.

Hb: Learner orientation, income level, race, gender, high school graduation status, and college entrance exam scores may be used to predict student persistence.

Population

The sample population consists of 468 first-quarter students enrolled in the Electronics Engineering Technology (EET) and Computer-Aided Drafting (CAD) Technology Associate Degree programs from September 1998 to September 1999 at a two-year proprietary college in southeastern Virginia. The five first-quarter classes studied started in September and December 1998, and March, June, and September 1999. Three hundred and four students enrolled for EET (65%) and 164 students enrolled for CAD (35%). The EET course of study is 36 months and the CAD program is 18 months long. All students are enrolled full-time and attend class five days a week for four hours each day in any one of three sessions: 8:00 A.M. to 12:00 P.M., 1:00 P.M. to 5:00 P.M., or 6:00 P.M. to 10:00 P.M. The classes are organized as cohorts and students may expect to stay with the same class until they graduate unless they elect to transfer to another session or drop out and re-enter at a later date. Approximately 40% of the students attend during the day and 60% attend at night. There are no residence facilities on campus and, therefore, all students are considered commuters. All students possessed either a high school diploma or General Equivalency Diploma (GED), as required for admission. They also passed the reading and numerical skills sections of the Career Program Assessment (CPAt) produced by American College Testing (ACT). Typically, fewer than 5% of all graduates go to further study at a four-year college immediately after graduation.

Instrumentation

The Learner Profile Questionnaire (LPQ) developed by Confessore and Confessore (1994) and the supporting Barron's Reference Protocol of Houle's Typology designed by Dianne Barron (1999) were used to determine learner orientation. The LPQ is a 31-question survey instrument that asks the respondent to report his or her interest and level of participation in adult learning activities over the past year. The first nine questions of the questionnaire ask the respondent to provide information about a learning project conducted during the last year. The next section, questions 10-18, are aimed at understanding the respondent's motivation for undertaking the project and require a self-assessment of personal skills relative to successful project accomplishment. The last section of the questionnaire asks the respondent to supply the following demographic information: age, gender, and highest education level achieved.

Learner orientation of the respondents was assigned using Barron's Reference Protocol for Houle's Typology. The protocol which is based on descriptions of learner orientations found in Houle's book, *The Inquiring Mind*, was validated through inter-rater reliability in the Confessore and Barron (1997) study. Fewer than 1.53% of the category assignments coded by the evaluators on their first pass at the data needed to be reconciled (Barron, 1999). The protocol uses questions 1 through 13B of the survey to measure the levels of the respondents' self-perceptions of desire, initiative, resourcefulness, and persistence to determine learner orientation. Items 14A through 18B of the LPQ which measure the respondents' self-perceptions of ability in reading, writing, quantitative, reasoning, and physical coordination skills were not used in the application of Barron's protocol. Using the protocol, the raw data is reviewed independently by two evaluators who each assign a learner orientation category to each respondent. The questionnaires are exchanged and the same procedure followed. Any resulting differences in coding are resolved by the evaluators again reviewing the reference protocol and the survey responses.

The instrument selected by the college as the entrance exam is the Career Programs Assessment (CPAt) developed by American College Testing (ACT). The test which consists of two parts, the Reading Skills Test and the Numerical Skills Test, currently exists in two Forms, B and C. The CPAt is designed to measure basic skills in math and reading of students intending to enroll in either EET or CAD. Students who fail either portion of the test are allowed to retake it. The reading and numerical skills scores are used as independent variables in this study.

In either form, the Reading Skills Test consists of 30 questions and is designed to evaluate an applicant's ability to read a short paragraph and answer multiple-choice questions containing four alternative answers. The questions are intended to evaluate literal comprehension (50% of the test), inferential comprehension (33%), generalization (17%). The reading portion must be completed within 25 minutes. The mean scores for the reading tests were 54.53 with a standard deviation of 7.67 for Form B and 54.50 with a standard deviation of 7.74 on Form C. The reliability coefficient for the reading tests were .77 for Form B and .80 for Form C.

In both forms, the Numerical Skills Test is designed to evaluate an applicant's readiness in basic arithmetic operations (50% of the test), arithmetic problem solving (30%), and multiple arithmetic operations and logical progressions (20%). The twenty-minute test consists of 25 multiple-choice questions with five alternative answers. Calculators are not permitted. The mean scores for the numerical skills tests were 56.14 with a standard deviation of 8.31 for Form B and 56.16 with a standard deviation of 8.31 on Form C. The reliability coefficient for the numerical skills tests were .80 for Form B and .78 for Form C. The reliability for each test was established using the Kuder-Richardson Formula 20.

The validity of the test is judged using the *accuracy rate*. The accuracy rate is the estimated percentage of correct admissions decisions. The score that maximizes the accuracy rate is referred to as the cut off score because it is expected to predict the highest percentage of correct admissions decisions. The accuracy rate is the maximum at the cutoff score that corresponds to a 50% chance of success in the program. The median accuracy rate means that a correct admissions decision can be expected for that same percentage of students applying for admission to a particular school or program. The median accuracy rate for students applying for the EET (electronics) program is 71% on the Reading Skills Test and 74% on the Numerical Skills Test. The median accuracy rate for students applying for the CAD (designer) program is 70% on the Reading Skills Test and 65% on the Numerical Skills Test (ACT, 1997, pp. IV21-IV39).

Data on the independent variables, race, gender, high school graduation status, and college entrance exam scores were obtained from the college education files. The final independent variable, income level, was obtained from the college finance files. The dependent variable in the study, student persistence, was determined from the education files.

Research Procedures

An education file and a finance file are maintained on every student who starts class. It is from these two sources that five of the six independent variables are obtained. Income level is taken from the finance file and is based on the adjusted gross income reported on the applicant's federal tax return for the tax year immediately preceding the year of enrollment. For independent students, the income level is based on the individual's tax return or a joint return, depending on the applicant's filing status. For dependent enrollees, the income level is based on the parent's tax return from the previous year. The nine income levels were grouped as follows:

1 = 0-6,000
2 = 6,001-12,000
3 = 12,001-12,001
4 = 20,001-25,000
5 = 25,001-30,000
6 = 30,001-36,000
7 = 36,001-40,000
8 = 40,001-50,000
9 = 50,001 +

The independent variables, race and gender, are reported by the applicant on the CPAt answer sheet. This information is transcribed onto the Admissions Action form that is maintained in the student's education file. Also reported on this form is the independent variable, high school graduation status. As a requirement for admission, students must show proof of high school graduation, i.e. a high school diploma or transcript. For those students who did not graduate form high school, a General Equivalency Diploma (GED) or California High School Proficiency Examination (CHSPE) are also acceptable. Entrance exam scores are also recorded on the Admissions Action form as a numerical value.

The Learning Profile Questionnaire (LPQ) was given to all first quarter students in each program during the first three weeks of class. Students were read a script stating the purpose of this research, how the survey would be used in the research, and assuring complete confidentiality in the analysis and reporting of the data. They were allowed whatever time they needed to complete the instrument which typically takes 20 minutes to finish.

Data Analysis

This study is a work in progress. All five sets of the LPQ have been administered and the first set for the September 1998 class has been scored. The other independent variable data: income level, race, gender, high school graduation status, and college entrance exam scores have been identified; however, none of this data has been formally assembled. Automated collection procedures using the college computerized grade and attendance system will facilitate gathering all but the income level data. Income level information will take somewhat longer because the raw data must be retrieved manually from the finance file and then sorted by the nine categorical income levels.

Once the data has been assembled, all variable data will be entered onto a Microsoft Excel spreadsheet. This data will then be exported into the SPSS (version 7.5) statistical program for analysis. This data will be analyzed using descriptive statistics to summarize the characteristics of the sample. Descriptive statistics include the frequency of scores, mean, median, mode, and the standard deviation for each independent variable of learner orientation, income level, race, gender, high school graduation status, and college entrance exam scores. These statistics communicate characteristics of the data as a whole and estimate the characteristics of the population. T-tests will be used to test the null hypothesis by determining how great the difference between two means must be in order for it to be judged significant. Chi-square statistics will be calculated to determine if persisters significantly differ from non-persisters with regard to the independent nominal variables in the study, learner orientation, income level, race, gender, and high school graduation status. This procedure involves a goodness-of-fit test wherein the sample frequencies that fall within certain categories are contrasted with those that might be expected based on normal distribution. ANOVAs will be used to determine whether there is a relationship between each dependent variable (persister/non-persister) and each of the independent variables. Multiple-classification analysis of variance may also be used to determine the relationship between one independent variable and two or more independent variables. This technique also makes it possible to test for relationships between the dependent variables and various interactions of the factors in the design.

The basic research question for this study was to determine how effective the selected variables, learner orientation, income level, race, gender, high school graduation status, and college entrance exam scores are in predicting student persistence. A discriminant analysis using the step-wise method will be used to answer this question. In this study, the independent variables are used to predict to a specific group (persisters/non-persisters).

It is also necessary to identify the variables that are most significant in creating this prediction. Discriminant analysis is the statistical technique most commonly used to examine these types of problems (Popham & Sirotnik, 1992).

Limitation of the Study

This study has a number of obvious limitations. First, the data obtained using the Learning Profile Questionnaire is self-reported, as is the race on the CPAt answer sheet. However, the validity and reliability factors for the LPQ have been established using self-reported data, and race may be verified by comparison of complementary data in the student's education and finance files. Second, as Pascarella and Terenzini (1983) found in their persistence study of 763 residential university freshman, this study was not able to distinguish between students who withdrew and transferred to other institutions and those who withdrew from formal higher education altogether. Clearly, these types of withdrawal are conceptually different and the explanations given in this study for departure may not apply equally to members of both of these groups. Third, a relatively small number of women attend the proprietary college surveyed. Fifteen percent of the college enrollment is female compared to 59.2% at all two-year proprietary postsecondary schools granting associate degrees and 61.0% at all public and private two-year institutions granting associate degrees (Department of Education, 1998). Finally, the single-institution and single-year sample may be considered limitations, however, the intent of the research design was to conduct a longitudinal study of entering cohorts at one type of institution, such as recommended by Tinto. The findings of this study may then be compared to those studies of other type institutions when conducting an analysis of institutional impacts upon dropout behaviors (Tinto, 1975, pp.119-120).

Delimitation of the Study

The study was delimited to students who were in their first quarter of associate degree programs in electronics engineering technology and computer-aided drafting technology at the proprietary college. However, the sample population of 468 first-quarter students equaled 100% of the students enrolled from September 1998 to September 1999 and consisted of students from a variety of ethnic economic backgrounds and academic ability. The diversity of this population mitigates the delimitation.

Conclusion

Data analysis is not yet completed, however, a preliminary analysis suggests that there is a relationship between student persistence and the selected variables of income level, race, gender, high school graduation status, and college entrance exam scores. The question still to be addressed is how this relationship may be affected when a student's learner orientation is considered.

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Examining The Differences in Preferred Learning Environments Between Members of The "X" and the Baby Boomer Generations

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Research on Generation X'ers suggests that this group typically learns very differently from those that came before them. Data on the preferred learning environments of approximately 200 "Baby Boomer," and "GenX" graduate students in administration were gathered using the Productivity Environmental Preference Survey. The results of this research and their implications for the design of HRD programs are presented.

Keywords: Diversity, Generation X, Learning

It has long been recognized that "life attitudes are not randomly distributed through the population" (Mirvis & Kanter, 1991, p. 47). Some groups of individuals, because of over-lapping life experiences, will react similarly to organizations' policies and procedures. When these "overlapping" life experiences are a result of the timing of their births, this phenomena is referred to as "Peer Personality, a set of collective behavioral traits and attitudes that later expresses itself through a generations's life cycle trajectory (Strauss and Howe, 1991, p. 32). Others refer to these similarities as "age cohorts" -a group of people who share a given historical or socially structured life experiences, the effect of which are relatively stable over the course of their life and serve to distinguish one generation from another (Rosow, 1978 as cited in Jurkiewicz and Brown, 1998. The groupof individuals that have come to be known as Generation X has been much the center of attention in recent literature concerning management and employees. As usual, stereotypes have evolved and negative opinions have been formed and reinforced. "Generation X", "The Post Baby Boom Generation", "The 13th Generation"; "Slackers"; "Baby Busters"; "Grunge Kids"' "TwentySomethings"; "After Boomers;" "The Clueless Generation." Just as there is no common term to describe this segment of the work force, neither is there a consensus as to the birth dates of this generation nor the approximate number of this group. McIntosh (1994) identifies those born between 1961 and 1981 as the 13th generation (because they were determined to the 13th generations of Americans). He suggests that this generation represents 79.3 million Americans. Others (Losyk, 1997) suggest that Generation X refers to those born between the years 1965 and 1976, and represent 44 million X'ers, as compared with the 77 million "bloomers" born between 1946 & 1964. Still others (Herman, 1998) use the term to refer to those born between 1965 and 1985, while Halford (1998) refer to those born after 1980 as Generation Y, "new baby boom," "echo boom," and "Millennial,"; and limit Generation X'ers to those born between 1965 and 1980. In 1995, about 31 percent of those aged 18-29 consider themselves members of a particular generation (Zill and Robinson), (establishing a relevant birth-time frame of between 1966 and 1977). Accepting the birth dates of the "Baby Boomers as between 1946 and 1965, and referring to those born after 1980 as the Generation Y'ers (Halford, 1998), would set the birth dates of the Generations X'ers at those born between 1966 and 1980. Extrapolating from the civilian labor force as found in the Statistical Abstract of the United States (as provided by Halachmi, 1988, p. 8), we calculated that the Generation X employees make up approximately about 39 million members or 29.8% of the civilian labor force as compared with 11% (plus or minus 2%) of those between 55 and 64 (Halachmi, 1998, p. 7).

Over-lapping Life Experiences

As Zill and Robinson (1995) warn us, sweeping generalizations about any group are bound to be incorrect. The individuals that make up Generation X are by no means homogenous, but they do share one large thing incommon. The one distinction about the members of this group is that they appear to be extremely different from earlier generations (Heselbarth, 1999; Dunn-cane, Gonzales, and Stewart, 1999; Corley, 1999; and McGarvey,

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1999). For example, as to over-lapping life experiences relevant to their education and training, many X'ers grow up with technology right at their fingertips. In their homes they usually had unlimited access to video games and some even had computers that they could freely use. Even further, some X'ers were fortunate enough to have computers in their classrooms and at arcades on weekends. Not only is technology akey factor in their environment, X'ers were probably more familiar with their television set than they were their schoolbooks. As students they studied their TV set as twice as many hours as they were in school (Macalister, 1994). Today's young adults are less confident that their predecessors about the stability of jobs, earnings, and relationships (Zill and Robinson, 1995). The Baby Busters are a much more cynical and realistic bunch. Many of them believe that the age of lifetime employment is long gone. They view their jobs as short-term--they'll stay three to five years than move on to something else (Eng, 1996). X'ers see every job opportunity as temporary or as a stepping stone to something else or something better (York, 1996). We believe that each of these experiences have relevance of the training\education of this generation.

Implications for Education/Training

Members of Generation X give education high marks. "People in Generation X view training as a way to improve their chances of getting promoted," (as reported in Lynch, 1998, p.1). Generations Xers, tend to make job decisions based on whether training is available. "The (organizations) that provide continuous education are in a better position to retain productive employees, (Caudron, 1997).

Research on Generation X'ers suggests that this group typically learns very differently from those that came before them (Dunn-Cane, et al, 1999; Raines, as quoted in Caudron, 1997; Wagschal, K., 1997; Wagschal, P. H., 1995). Standouts of this generation are powered by computer literacy and a desire to control their own destinies (York, 1996), they are amazingly technoliterate. From the Internet to CD-ROMs, familiarity with new technology is just a mouse-click away ((Caudron, 1997). Twentysomethings have tremendous capacity to process lots of information. Strauss calls this skill "parallel thinking," the ability to concentrate on multiple tasks at the same time (Filipczak). Because Generation X'ers are the first generation to grow up fully integrated with information technology, "they are comfortable with sound bites, close-up cameras, and quick changing, sharp images. ...They like to read copy that uses short, snappy phrases, charts, diagrams, and cartoons. They want their information concrete, concise, and to the point," (Losyk, 1997, p. 41). Tulgan (as quoted in Caudron, 1997), says, "I'm not saying you must change the learning objectives; you must change the process." He recommends focusing on what Xers are going to be able to do, no what they need to know. In the academic classroom, Xers "lamented the quantity of reading, class presentations, research reports, and exams that were required," (Wagschal, 1997, p. 23). To get their attention, Caudron (1997), suggests make training experiential. "As much as possible, use all six senses, role play, and simulation learning...," (p. 23). She goes onto say, "To give Xers a sense of control over their learning, it's wise to provide as many options as possible where and when they can participate. That means a choice of locations and times," (p. 24). Contrary to the conventional wisdom of adult learning , that adult learn best when their wealth of personal experience can be tied to the subject matter, some instructors sense that Xers don't feel that their personal experience was valuable. "They had constantly been reminded that they scored low throughout their educational experiences, and the expectations of their instructors were low," (Wagschal, 1997, p 23). To summarize some of the instructional attributes of Generation Xers, Caudron concludes:

> Training for these individuals should focus on outcomes and put learners in control to get buy-in from employees. It should also be flexible to help them fit training into their busy schedules.
> Moreover, training should offer eye-catching,highly scannable training materials, because
> Gen Xers are attracted to entertaining and visually pleasing experiences. Lastly,
> (organizations) should provide continuous education because young people strive for growth.(p. 20).

On reflecting on aspirations for teaching Generation Xers, Wagschal (1997, p. 25) expresses the hope to be ,"..able to develop new approaches to teaching that will improve their opportunities for learning while respecting--and even capitalizing on--their differences." She reminds us all that respecting the uniqueness of different generations is only a small part of responding to the individual needs of all students.

Learning Styles

Malcolm Knowles (1973), points out that understanding how a person learns is a major requisite for a successful educational program. It has been suggested that educators must have more knowledge and understanding of the learning process, particularly how individuals learn (Sims, R.R. & Sims, S. J., 1995). The question of how a person learns is the focus of the concept of learning style (Pigg, Busch and Lacy, 1980). Learning styles can be defined as characteristic cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment (Keefe, 1979). Studies have shown that identifying a participant's learning style and providing appropriate instruction in response to that style can contribute to more effective learning (Claxton & Murrell, 1987).

As Doyle and Rutherford (1984) point out:

> The wide popularity of proposals and programs for matching learning styles would seem to have two sources. First, the logic underlying the approach is compelling. Learners differ in a wide variety of ways and these differences are likely to influence how they respond to and benefit from a given instructional method or program....Second, the approach seems to offer an intelligent and practical framework for the organizational problems of dealing with diversity among students. (p.20)

However, "Except for some relatively isolated situations and work of particular individuals, ..., it is fair to say that learning style has not significantly affected educational practices in higher education..." (Claxton and Murrell, 1987, p. 1).

A major obstacle to improving instructional effectiveness through an understanding of learning styles is the lack of consensus as to definitions of important concepts in this field. In this presentation, the audience will be exposed to a variety of learning styles that have been identified as having specific relevance to the improvement of the learning process.

Learning Style Dimensions Important for Improving the Learning Process

Keefe (1979) has identified several dimensions of learning styles that appear to have the most relevance to the improvement of the learning process. They are: Field independence vs. dependence; Perceptual modality preferences; Conceptual Tempo; Leveling vs sharpening ; Conceptual level; Locus of Control; Achievement motivation; Social motivation; and Masculine-feminine behavior. (For a more detailed description of each of these learning styles and a description of the instruments used to measure these student attributes see Keefe [1979], or Wooldridge, [1994]).

Research Design

For this presentation learning style data were gather from approximately two hundred (200) students enrolled during the Fall semesters of 1998 and 1999 in the selected graduate courses in educational and public administration at Virginia Commonwealth University. One hundred and five (105) or fifty-two and eigth tenths of a percent were born between one or after 1946 and before on during 1965 and are classified as "Baby Boomers." Ninety-four (94) or forty-seven and two tenths of a percent, were born during or after 1966 and before or during 1980 and are classified as "Generation Xers." One hundred and six of the subjects were enrolled in graduate courses in Educational Administration and ninety three were enrolled in graduate courses in Public Administration..

The instrument used in gathering data was the Productivity Environmental Preference Survey (PEPS) developed by Price, Dunn and Dunn. This instrument claims to be the first comprehensive approach to the diagnosis of an adult's individual productivity and learning style. Further, the instrument aids in prescribing the type of environment, working conditions, activities and motivating factors that would maximize individual output. PEPS does not claim to measure underlying psychological motivation, value systems, or the quality of attitudes. Rather it is said, " ..[T]o yield information concerned with the patterns through which the highest levels of productivity tend to occur. It therefore reveals how an employee prefers to produce or learn best, not why" (Price, 1996)

The PEPS analyzes an individual adult's personal preferences for each of twenty-one different elements. These include, in addition to the four elements of *Perceptual modality preferences* described above, (1). Noise

Level-Quiet or Sound, (2). Light-Low or Bright, (3). Temperature- Cool or Warn, (4). Design-Informal or Formal, (5). Unmotivated/Motivated, (6). Non-Persistent/Persistent. (7). Irresponsible/Responsible, (8). Structure-Needs or Do Not Need, (9). Learning Alone/Peer-oriented Learner, (10). Authority Figures Present, (11). Learning in Several Ways, (12). Requires Intake, (13). Functions Best in Evening/Morning, (14). Functions Best in Late Morning, (15). Functions Best in Afternoon, (16). Mobility. Ninety percent of the reliabilities are equal to or greater than .60 (Price, 1996 p. 14). This instrument has been used in conducting research on the preferred learning styles of law students and appropriate learning strategies (Boble and Dunn, 1998); investigate gender, racial and age differences in preferences for productive work environments (Wooldridge, Maddox and Zheng, 1995), the preferred perceptual learning style modality of court reporters (Collidge-Parker, 1989), an analysis of learning and productitiy styles across occupational groups in a corporate setting (Galvin, 1992), and the effect of knowledge of learning styles on anxiety and clinical performance of nurse anethesiology students (Garcia-Otero, 1992), to name just a few of the research endeavors using this instrument. A more detailed of each of the different elements is presented below:

Noise Level: Some people need quiet when they are learning, while others notice neither noise nor movement once they begin to concentrate; they can "block out" sound. Some people need sound; they invariably turn on a radio, stereo, or television when they study as a screen against random noise distractions.

Light-Low or Bright: Some people work best under very bright light, whereas others need dim or low light.

Temperature-Cool or Warm: Many participants "can't think" when they feel hot and others can't when they feel cold; some concentrate better in either a warm or cool environment.

Design-Informal or Formal: Many participants think best in a formal environment, seated on a chair like those found in conventional classrooms. However, some learn better in an informal environment, on a lounge chair, a bed, the floor, on pillows or on carpeting.

Unmotivated/Motivated: Motivation is the desire to achieve academically.

Non-Persistent/Persistent: This element involves a person's inclination either to complete tasks that are begun or to take intermittent breaks and return to assignments or learning activities later.

Irresponsible/Responsible: This element involves participants' desire to do what they think they ought to so. In learning situations, responsibility often is related to conformity or following through on what an instructor asks participants to do.

Structure-Needs or Do Not Need: This element involves a participant's need for specific directions or explanations prior to undertaking or completing an assignment.

Learning Alone/Peer-Oriented Learner: Some individuals prefer to study by themselves, while other prefer to learn with a friend or colleague. In the latter situation, discussion and interaction facilitate learning. Sometimes participants prefer to study alone, but in close proximity to someone.

Authority Figures Present: Some people feel better or more comfortable when someone with authority or recognized special knowledge is present.

Learning in Several Ways: This element has alternate meanings. It suggests that the person may learning easily alone and also with other people present (peers, or with an authority figure, or in any combination) or that the person needs variety as opposed to routine.

Requires Intake: This area describes participants who often eat, drink, chew, or bite objects while concentrating, as opposed to those who prefer no intake until after they finished studying.

Functions Best in Evening/Morning: These are two of the four "time of day preferences." Evening and morning are on a continuum; if a score falls below 40, the participant tends to be an evening person; if the score is above 60, the participant most prefers to learning in the morning.

Functions Best in Late Morning: The energy curve for these participants is highest in the late morning, and they prefer to learning during this time of day.

Functions Best in Afternoon: The energy curve for these participants is highest in the afternoon, and they prefer to learn during this time of day.

Mobility: How quietly can the person sit, and for how long? Some people need frequent breaks and must move about the instructional or work environment. Others can sit for hours while engaged in learning or working, particularly if they are interested in the task.

Individuals may be given the PEPS in writing, on tape, or orally. In this study a written "op-scan" version was used . The questions are to be answered on a Likert Scale: Strong agree is a 5 and strongly disagree is a 1. Since there are questions that, if pondered, could cause modifications, limitations, and exceptions in responses, respondents were encouraged to give immediate reactions to each question on a "feeling" basis. The entire questionnaire need not be completed in one sitting, but may be responded to at intervals that are convenient to the individual. The estimated time to complete the survey is 20 - 30 minutes.

The PEPS is returned to Price Systems, Inc. Lawrence, Kansas for scoring. A computerized, individual profile of each student's response to the PEPS is provided. Each profile contains (if completed on the answer sheet) the individual's name or identification number, sex, date answer sheet was scored, group identification, raw score, standard score, PEPS area heading, and a graph of the relative location of each person's standard score in each area. The standard score scale ranges from 20 to 80 with a mean of 50 and a standard deviation of 10. The standard score is calculated based on the scores of adults who have taken the PEPS. Individuals having a standard score of 60 or more strongly prefer that area as a factor when they study or work. Individuals having a standard score of 40 or less do not prefer that factor when they study or work (Price, Dunn and Dunn, 1982).

There are two printouts included in the PEPS Area Summary. The first summarizes the elements for all individuals in the group who have standard scores of 60 or more in each of the areas. The second summarizes the elements for all individuals in the group who have standard scores of 40 or less in each of the areas.

Price, Dunn and Dunn (1982) have suggested pedagogical strategies for individuals having standard scores either of 40 or below or of 60 or above for each of the twenty learning style elements. These instructional suggestions are provided below, with the scores for each learning style element earned by these participants from the two age groups.

Sound

For standard score of 60 or more, provide soft music, earphones, conversation areas, or an open work environment.

For standard score of 40 or less, establish silent areas; provide individual alcoves with sound proofing; provide ear plugs to block sound, if necessary.

Age Groups:	40<	>60
Gen. X (n = 94)	2.1%	5.3%
Baby Boomers (n = 105)	0%	4.8%

Ligh

For standard score of 60 or more place trainee near window, under bright illumination; add table or desk lamps.

For standard score of 40 or less, create work spaces under indirect or subdued light, away from windows; use dividers or plants to block or diffuse light.

Age Group:	40<	>60
Gen. X	11.7%	19.1%
Baby Boomers	20.0%	20.0%

Formal Design

For standard score of 60 or more, create "formal" climate-rows of desks, straight chairs, walls having straight lines and simple designs, and direct lighting.

For standard score of 40 or less, provide "informal" climate--soft chairs and couches, pillows, some color, lounge furniture, plants, etc.

Age Group:	40<	>60
Gen X	10.6	10.6
Baby Boomers	7.6%	15.2%

Structure

For a standard score of 60 or more, be precise about every aspect of the assignment; permit no options; use clearly stated objectives in a very simple form; list and itemize as many things as possible, leave nothing for interpretation; clearly indicate time requirements and the resources that may be used; required tasks should be indicated; as successful completion is evidence, gradually lengthen the assignment and provide some choices from among approved alternative procedures; gradually increases the number of options; establish specific working and reporting patterns and criteria as each task is completed.

For standard score of 40 or less, establish clearly stated objectives, but permit choices of resources, procedures, time lines, reporting, checking, etc.; permit choices of environmental, sociological and physical elements; provide creative options and opportunities to grow and to stretch talents and abilities; review work at regular intervals but permit latitude for completion if progress is evident.

Age Group:	40<	>60
Gen X	4.3	35.1
Baby Boomers	5.7%	18.1%

(For each of the next four areas -auditory, visual, tactile and kinesthetic- for standard score of 40 or less, use resources prescribed under the perceptual preferences that are strong. If none are 60 or more, use several multisensory resources such as computers, videotapes, sound filmstrips, television and tactual/kinesthetic materials.).

Auditory Preferences

For standard score of 60 or more, use tapes, videotapes, records, radio, television and precise oral directions when giving assignments, setting tasks, reviewing progress, using resources or for any aspect of the task requiring understanding, performance, progress and/or evaluation.

Age Group:	40<	>60
Gen X	6.4%	35.1%
Baby Boomers	8.6%	20.5%

Visual Preferences

For standard scores of 60 or more, use pictures, filmstrips, computers, films, graphs, single concept loops, transparencies, diagrams, drawings, books, and magazines; provide resources that require reading and seeing; use programmed learning (if in need of structure) and written assignments and evaluations.

Age Group:	40<	>60
Gen X	10.6%	9.6%
Baby Boomers	18.1%	5.7%

Tactile Preferences

For standard score of 60 or more, use manipulative and three dimensional materials; resources should be touchable and moveable as well as readable; allow these individuals to plan, demonstrate, report and evaluate with models and other real objects; encourage them to keep written records.

Age Group:	40<	>60
Gen X	7.4%	16.0%
Baby Boomers	4.8%	13.3%

Kinesthetic Preferences

For standard score of 60 or more, provide opportunities for real and active experiences for planning and carrying out objectives; site visits, seeing projects in action and becoming physically involved are appropriate activities for these individuals.

Age Group:	40<	>60
Gen X	4.3%	8.5%
Baby Boomers	4.8%	5.7%

The results of selected statistical analysis of these findings will be present at the Conference.
The "over-lapping" life experiences of the X Generation, does however, lead these researchers to suggest that further learning style research be conducted to determine if this generation requires different learning environments. It would be particularly interesting to see if Generation X differs from it predecessors on such learning style dimensions as Field Independence vs dependence, Conceptual Tempo, Locus of Control, and Achievement Motivation (see Wooldridge, 1995 for a description of these learning styles).

But of course, each of these projects will be the subject of another, equally enriching, AHRD presentation. This addition research is essential, since to refer back to the insights of Wagschal 1997), "Respecting the unique experiences of different generations is only a small part of responding to the individual needs of all students." (p. 25).

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Theory Building Research in HRD--Pushing the Envelope!

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The purpose of this innovative session is to foster a community of scholars interested in the advancement of theory building research in human resource development.

Keywords: HRD Theory, Theory Building

The Human Resource Development (HRD) profession is on the verge of a significant theory building thrust. A 1998 AHRD theory symposium titled, "The Discipline of Human Resource Development," attracted about 60 participants, many of whom have continued the dialogue and produced numerous publications. That symposium presented three espoused theories underlying the discipline of HRD. This 2000 symposium will focus on theory building research methodologies appropriate for HRD as well as the practical consequences of research-based theory. Four related topics in the context of HRD will receive attention: the Role of Theory Building, Philosophy Building Research, Theory Building Research, and Practical Consequences of Sound Philosophy and Theory.

Role of Theory Building in HRD

We develop theories because aspects of the real world are so complex that they need to be conceptually simplified in order to be understood (Dubin, 1976). A well-constructed theory gives clarity to a complex phenomenon by providing a system for understanding its core ideas and interrelationships. For this reason, a simple, elegant theory that makes real world phenomena comprehensible is desired over a complex, elaborate theory. These fundamental assumptions provide the basis for a discussion among innovative session participants.

Philosophy Building Methodology for HRD

The philosophical framework for HRD consists of three key components:

1. Ontology: the component that makes explicit the commonly held view of the nature of the world and phenomena of HRD (how we see our world);
2. Epistemology: the component that makes explicit the commonly held nature of knowledge in HRD, and the necessary and sufficient requirements to hold and claim knowledge in our field (how we think about our world);
3. Axiology: the component that makes explicit the commonly held view of how we ought to act in our field, our espoused aims, ideals and proper methodologies and methods for HRD inquiry and practice (how we should and actually act in research and practice).

These three components interact in a dynamic and systemic way, together forming the guiding framework for a congruent and coherent system of thought (Bohm, 1994) and practice in the HRD field.
There is an interactive and dynamic relationship among the key components integral to a sound philosophical framework for research and practice in HRD.

Although often thought of as a discipline of abstract thought with little practical utility, philosophy can play a very useful and purposeful role in HRD. To get a sense of this potential utility one needs to consider philosophy

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as a system of thought and action (Bohm, 1985). That is as an activity or process of inquiry that is concerned with disciplined reflection, ways of thinking about certain questions, interpreting texts, trying out ideas and thinking of possible arguments for and against them, and wondering about how concepts really work.

Philosophy helps develop capacities for thinking (Honderich, 1995). At the heart of it, philosophy is a systematic examination of the assumptions that underlie action. It is not studied for the answers it provides, but for the questions it raises. Theories-in-use are investigated and analyzed to surface the essences of our thoughts and ideas that, ultimately, drive our actions. Magee (1971) told us that "one of the tasks of philosophy is mapping the logic of…discourse, laying it out, so to speak, so that a person can make his way about it successfully" (p. 45). Philosophy presents thought and action in an integrated, interactive system.

In fulfilling this role, it affords practice in criticism—for example, building counter arguments to common wisdoms (Root, 1993) and developing examples for questionable generalizations. It also develops responsiveness to concrete cases and an appreciation of the thinking expressed in these. Finally, it enables interpretation and theorizing, for example, by relating positions of one area of inquiry to those in another.

Philosophy thus provides us with practical ways of thinking about certain sorts of questions (questions of the nature of reality, truth and ethics) and the use of logical argument, disciplined reflection and theoretical reasoning in this questioning process. It helps us develop the practice of rational critical thinking about things concerning the nature of the world, justification of beliefs, and the conduct of life. Philosophy engages us in the interpretation of texts and the criticisms of common wisdoms that are often taken for granted.

Implications for practice.

Reflection about philosophy (ontology, epistemology, axiolgy) ensures that as practitioners we are leading a worthy "examined life"—acknowledging that beliefs about basic ends and principles lead to concrete conclusions and action. This process can be done unconsciously where it is subject to many hazards. Or, it can be done consciously where one (or an entire field) strives for clarification and alignment. This is not to say that this clarification process is ever finished-- it is a continual process where "new light is always dawning on the meaning of concepts at every level, with the consequence that the whole enterprise has to be forever examined" (Magee, 1971, p. 47).

However, striving for alignment between the key components of philosophy and being grounded in those articulated by the discipline of HRD will undoubtedly result in better and more consistent practice. This is especially relevant in HRD, an applied field driven by its practice, where theory sometime lags behind the challenges being faced in organizations. Philosophy provides some structure on which to make decisions when research is not there to support a practice or policy. Magee (1971) identified the importance of philosophy to complement science when he explained:

> Conclusions about what to do is a mixture of judgements about the "excellencies to be produced" combined with empirical or scientific knowledge about how to produce them. It is important to notice that we cannot derive the list of prescriptions, excellencies, that are a set of value judgements about what to do, from the descriptive, empirical, knowledge accounts of what the facts usually are. It is, in short, not possible to go directly from scientific understanding to policy and practice. Practice is always a combination of prescriptive convictions and descriptive understanding. (p. 46)

The logic of philosophy allows us to engage in thinking that is at once disciplined and imaginatively creative. We are able to apply philosophical methods to practical problems and ascertain what the issues are and how different assumptions affect the problem. In addition, we can use philosophy to analyze and interpret practice. In these ways the idealism of philosophy can be used to improve practical problems. The act of philosophy cultivates the capacities and appetite for reflection, for exchange and debate of ideas, for life-long learning, and for dealing with problems for which there are no easy answers.

Implications for research and theory-building.

Research and theory-building are only parts of an overall context that drives HRD. How we see the world and what we recognize as knowledge in HRD fundamentally affects the methodologies we employ to research and build theory. A too limited view of ontology and epistemology can limit the scope and utility of HRD. A too broad view can lead to the slippery slope of relativism where there are few standards. Philosophy ultimately requires us to consider what knowledge and theory really are. When placed within a context of assumptions about reality and nature our current views of these things may or may not change. Marsick (1990) stated:

> ...if we are to describe accurately and explain the world we research, then, as we work we must test our assumptions about what we view as knowledge, whether our view is compatible with the nature of organizations and the phenomena we are researching, and how we believe we should go about researching these phenomena. (p. 33)

It is important to acknowledge how science and philosophy complement one another and proceed on a journey that demands work in both areas from HRD scholars. Philosophy is not more or less important than science, it is just different. While science tells us what the world contains, philosophy asks about different ways to classify these things. While science produces knowledge, philosophy asks what we can know and how. While science provides new knowledge of the observable based on experimental tests, philosophy suggests "rules" for the stuff of reality and how it is organized. Philosophy looks behind science and analyzes concepts/notions and methods that are used. It pushes a discipline such as HRD to strive for even more than good research. In this way, philosophy may suggest important standards of rigor for research and theory building that have yet to be considered.

Implications for Evolution of HRD

Philosophy also plays an important role in the future of HRD. HRD continues to deal with perennial issues that threaten its stability and future effectiveness. One such issue is the purpose of HRD that has been extensively discussed during the last five years. Philosophy provides a framework for articulating the purpose of the field. Surfacing and clarifying key assumptions about ontology, in particular, provides a set of criteria to guide future discussions of what is and isn't HRD. We can analyze different schools of thought emerging in HRD (i.e. performance, learning, integrity) to see where they come together and where they do not. Philosophy can be a rigorous backdrop for judging whether and to what extent the field can accommodate multiple definitions and purposes. This same set of criteria can also be used to balance the long- and short-term interests of HRD—helping us to do both for the optimization of the field. Philosophy can be an important mechanism to guide the nature of conversations that need to continually be held in HRD. This will enhance the mature growth of HRD.

Theory Building Methodology for HRD

The process of theory development itself has been discussed in the context of theory building as a research method for HRD (Torraco, 1997). Torraco emphasized the important roles theory serves, especially in applied disciplines like HRD. He reviewed several methodologies for theory building, including the theory building models of Dubin (1978), Snow (1973) and Weick (1989). Case study research and grounded theory were also discussed as valuable resources for theory building in HRD. Torraco observed that the richness and complexity of the organizational contexts served by HRD require theory-based interventions guided by insights from grounded theory and case study research.

Weinberger (1998) reviewed commonly held theories of HRD including learning theory, organizational learning, the learning organization, the theory of performance improvement, systems theory, and economic theory. Holton (1999) proposed a taxonomy of performance improvement domains and characterized HRD's unique capabilities for "whole systems performance improvement. Swanson (1999) framed the discipline of HRD within the context of performance improvement in his discussion of the context of HRD work. He suggested component theories for HRD and a research agenda to advance the theory base of HRD for performance improvement. Lamenting the current state of performance improvement practice that Swanson sees as experiencing a "theory application deficit disorder," he offered the domains of economics, psychology and systems theory as the appropriate components of theory development of HRD for performance improvement.

Theorists must rely on both their theory building and domain-specific expertise to develop the concepts and interconnecting matrices that constitute theory. Yet, the literature available to guide theorists on methods of theory building is sparse and uneven. How does the theorist know which theory building methodology to use? In the following sections, positivistic theory-building methods, case study approaches to theory-building, and grounded theory are discussed as alternative methodologies for theory building. A discussion will be facilitated to allow session participants to discuss the domain (content area) of theory building they are interested in and to match their theory-building research objectives with the appropriate theory-building methodology.

Theory-building Methods.

Kaplan (1964) discussed theory building as a vehicle for the advancement of knowledge in any discipline where knowledge growth occurs both by intention and by extension. Knowledge growth by intention occurs when a partial explanation of a whole domain is made more and more complete. Early theories explain key portions of the domain, and, in doing so, highlight the need for subsequent theories. Knowledge growth in the domain is likened to gradually adding light to a dark room or bringing a microscopic field into sharper focus. In the field of HRD, knowledge growth by intention is occurring in organization development (OD), which was once based almost exclusively on "normative-reeducative" change strategies and group process interventions. The demands of today's business environment require OD to further integrate its therapeutic intervention model and normative perspective with a realistic human resource investment perspective. The theory base of OD is expanding to provide a broader foundation for the strategic value of OD (Beer & Walton, 1990).

Knowledge growth by extension occurs when a relatively complete explanation of a particular domain is then carried over and to applied to adjoining domains. A metaphor for theory building by extension is the creation of a mural scene by scene. The development and application of general systems theory to a wide range of professional disciplines illustrates this type of knowledge growth. Originally developed by the German biologist von Bertalanffy (1950), general systems theory was then applied to the fields of economics (Boulding, 1956) and mathematics (Rapoport, 1956), later to the study of organizations (Katz and Kahn, 1968) and human performance technology (Gilbert, 1978), and recently to field of HRD (Jacobs, 1989).

Snow (1973) offered a three-phase, process model for theory building. Patterned after an early model for describing the operation of human memory, Snow's model is composed of: (a) recognizing metaphors, (b) constructing *models*, and (c) organizing metatheories. The initial, loose conceptions of the theorist (metaphors) are further developed into formal representations (models) that are presented in graphic-pictorial, geometric, or symbolic-mathematical form. A metatheory develops as one or more successful models in the same area become widely confirmed and accepted as accurate descriptions of important phenomena. Snow applied his theory building model to research on teaching. Using his three-phase model to build a theory of teaching, Snow identified the Bayesian sheepdog as a metaphor for the teacher's role in guiding the direction and development of a "flock" of students. The metaphor was further developed into an analytical model of key teacher-student interactions while maintaining the image of teacher as shepherd. Snow suggested that this evolving theory of teaching might become incorporated into a grander metatheory of teaching through integration with existing theories of behaviorism, instructional design, and human problem solving. Snow's three phases of theory building were used to model the role of a teacher, thus explaining and clarifying sophisticated classroom interactions.

Snow defined metatheories as families or categories of theories that arise when an original theory stimulates further research leading to descendent and derivative theories that apply to the same domain. Metatheories become foundational structures upon which individual related theories can be built. Metatheories of interest to HRD that have given rise to related theories include learning theory, psychoanalytic theory, human capital theory, and general systems theory.

Weick (1989) argued that high quality theories are created through "disciplined imagination" on the part of the theorist. The inadequacy of theories in organizational studies has resulted, according to Weick, from the inability of theorists to accurately represent the process of theorizing. Weick characterizes theory building as disciplined imagination, "where the 'discipline' in theorizing comes from the consistent application of selection criteria to trial-and-error thinking and the 'imagination' in theorizing comes from deliberate diversity introduced into the problem statement, thought trials, and selection criteria that comprise that thinking" (p. 516). Theories of higher quality are produced when theorists pay particular attention to three aspects of theory building: (a) accurate statements of the problem to be addressed by the theory are specified, (b) many diverse conjectures about how to solve the problem are offered, and (c) a large number of diverse criteria for selecting among these conjectures are applied. By elaborating on what the theorist actually does in working through the problem statement, thought trials, and selection criteria needed for theory building, Weick adds clarity and structure to the nebulous process of theory building.

More so than any of the theory building strategies discussed so far, Dubin's (1978) eight-phase methodology for theory building lays out an explicit roadmap for the theorist to follow. The methodology offered by Dubin, a well known writer on theory and theory building, is frequently used as a template for building theories in the behavioral sciences. The eight phases of theory building are: (1) units (i.e., concepts) of the theory, (2) laws of interaction (among the concepts), (3) boundaries of the theory (the boundaries within which the theory is expected to apply), (4) system states of the theory (conditions under which the theory is operative), (5) propositions of the theory (logical deductions about the theory in operation), (6) empirical indicators (empirical measures used to make the propositions testable), (7) hypotheses (statements about the predicted values and relationships among the units), and (8) research (the empirical test of the predicted values and relationships). The first five phases of the methodology represent the theory building component of Dubin's model, and the last three phases represent the process of taking the theory into real world contexts to conduct empirical research. Although theorists must consider the entire scope of Dubin's model for effective theory building, theory building and empirical research are often separated, and each of these is conducted as a distinct research effort.

The theory that emerges is not seen as the discovery of some preexisting reality "out there." Theory is considered an interpretation, and is, therefore limited in both a temporal and contextual sense. Theory grounded in practice can never be established forever, and its validity is eroded as contemporary social reality changes. These limitations notwithstanding, such grounded theory can provide concise theoretical formulations for the complex phenomena encountered in organizations.

Practical Consequences of Research-based HRD Theory

Practical consequences of sound HRD theory are the true motivation for the pursuit of theory-building research. Having said this, the popular notion of philosophy and theory being disconnected from practical matters continues to this day. Within HRD there is an overt resistance to specifying its theory beyond personally held values and truisms. HRD is a profession rift with gimmicks and exaggerated claims (Swanson, 1997). Edward O. Wilson, renowned scholar, informed us ".... that new ideas are commonplace, and almost always wrong. Most flashes of insight lead nowhere and statistically have a half-life of hours or maybe days (1998, p. 55). "Nothing in science--nothing in life, for that matter-- makes sense without theory (Wilson, 1998, p. 52)."

While theories are initially a product of human imagination, the practical consequences of research-based theory, according to Wilson (1998), are focused on the following practical factors:

1. Repeatability: the same phenomenon is confirmed or discarded.
2. Economy: information that is both simple and aesthetically pleasing.
3. Mensuration: using accepted scales, generalizations about the phenomenon are rendered unambiguous.
4. Heuristics: new knowledge initiates further discovery and provides additional test of the original principles.
5. Consilience: explanations of phenomena most likely to survive as a result of their connection to and consistency with other phenomena.

HRD, as an applied discipline, presents the demand of connecting theory and practice. As an applied discipline, HRD also recognizes that the contributions of practice and development efforts to HRD theory as well as contributions from research (Swanson, 1997). Swanson refers to this relationship as a Theory-Research-Development-Practice Cycle "that allows ideas to be progressively refined as they evolve from concepts to practices and practice to concepts" (1997, p. 13).

Conclusion

The very best community of HRD scholars interested in advancing the theory in the profession would be logically made up of theory building researchers and reflective practitioners. As an applied discipline, HRD has many practitioners and developers capable of serving as partners in advancing the theory of HRD. It would also seem logical that the Academy of Human Resource Development could serve as the catalysts and host to such a continuing effort.

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The Role of Theory Building in Maturing the Human Resource Development Profession

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Theory building and theory building research is starting to draw increased attention among Human Resource Development (HRD) scholars. There is a growing recognition of the importance of theory building in maturing thought and practice in HRD. Through a synthesis of existing theory building literature and a discussion of the core concepts, issues and challenges associated with theory building in an applied field, this article draws attention to the need to develop and understand what makes for good theory and theory building research in HRD. It further highlights the importance of embracing multi-paradigm research perspectives for stepping up to the task of theory building in the HRD profession.

Keywords: Applied Theory, Theory Building Research, Theory Building Methodology.

Human Resource Development (HRD) is concerned with practice. Thus, conversations in the field often focus on the How rather than probing for deeper understanding of the What and the Why of the phenomena of HRD (Chalofsky, 1996; Ruona & Lynham, 1999). Theory building research in HRD is essential for addressing some recurring conversational problems in the profession. Theory building research can not only help HRD address the call for HRD theory, but it also offers a means for stepping up to the perennial problems in HRD practice, many of which are amenable to being solved through theory.

It is the purpose of this paper to consider the importance, challenges and task of theory building in maturing the HRD profession. This topic is presented in four parts: a general introduction to theory building in HRD; a synthesis from the literature of what we do and do not appear to know about theory building in HRD; a presentation of key challenges relating to applied theory building in HRD; and, an overview of concluding implications and next steps for HRD in rising to the task of theory building research and development.

A General Introduction to Theory Building in HRD

A review of the existing body of knowledge on theory building in HRD reveals a limited number of articles on the topic. This topic has only begun to draw attention in HRD since the early 1990's and somewhat increasingly so since 1996. It appears that authors outside of HRD were the first to attend to the topic of theory building, the most noteworthy of whom include Dubin (1976, 1978) from industrial psychology, Hearn (1958) from social work studies, Reynolds (1971) and Cohen (1991) from sociology, Patterson (1986) from social psychology, and Bacharach (1989), Gioia & Pitre (1990), Eisenhardt (1989), Van de Ven (1989) and others from organizational studies.

Within HRD there are a small number of authors who have started to turn their attention to theory building, most notably, Chalofsky (1998), Hansen (1998), Hardy (1999), Hatcher (1999), Marsick (1990), Mott (1998), Ruona & Lynham (1999), Shindell (1999), Swanson & Holton (1997), and Torraco (1997). There is also evidence that a monograph on *Systems Theory in HRD*, edited by Deanne Gradous in 1989, played an important role in sparking attention to theory building in HRD. Given the above history one must ask why theory building is important to the maturing of the HRD profession. However, to set a useful context for this discussion, some key concepts and terms associated with theory building first require clarification.

Core Theory Building Terms and Concepts

According to Thomas (1997) the concept of *theory* is defined in almost as many ways as there are authors on the topic. Dubin (1978) defined theory as "the attempt of man [sic] to model some theoretical aspect of the real world" (p. 26). This definition was refined by Torraco (1997) for the purposes of describing theory in the context of HRD: "Theory simply explains what a phenomenon is and how it works" (p. 115). Dubin (1976) stated that the purpose of theory "is to make sense of the observable world by ordering the relationships among elements that

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constitute the theorist's focus of attention in the real world" (p. 26). Bacharach (1989) offered a similar definition, describing theory as a "statement of relationships between units observed or approximated in the empirical world" (p. 496). Senge (1994) described theory as "a fundamental set of propositions about how the world works, which has been subject to repeated tests and in which we have gained some confidence" (p. 29). The definition of theory to be used for purposes of this discussion is based on one offered by Gioia and Pitre (1990), namely, that *theory is a coherent description, explanation and representation of observed or experienced phenomena.* Although the term Coherent, used in this definition, may not appear to convey an adequate standard of rigor in theory, it needs to suffice until some of the discussions of theory building research method and guiding philosophy have been discussed and agreed in HRD. The choice of definition of a theory is a fundamental issue in theory building.

Theory building is the process of building theory and is informed and influenced by ones' view or definition of theory. Torraco (1997) provided a crisp description of theory building as "the process of modeling real-world phenomena" (p. 126). Building off these definitions, theory building will be taken to be *the process or recurring cycle by which coherent descriptions, explanations and representations of observed or experienced phenomena, are generated, verified and refined.*

The *product or intended outcome* of theory building is, according to Dubin (1976), twofold: (1) outcome knowledge in the form of, for example, explanation and predictive knowledge, and (2) process knowledge, in the form of increased understanding of how something works. Reynolds (1971) suggested that theory and theory building should meet as many of the following goals of science as possible: (a) to provide a typology (a means of classification), (b) to be useful for explanation and prediction (of phenomena), (c) to provide a sense of understanding (of the phenomenon being studied), and (d) if possible, to enable control of the phenomenon. It must be noted that both the perspectives of Reynolds and Dubin are informed by a specific philosophy of the nature of scientific knowledge.

Another important term is that of *a knowledge base*. This term can be understood as *the collection and integrated system of intellectual and practical concepts, components, principles, theories and practices that undergird and form the foundations of a discipline or field of study and practice.* A knowledge base defines the unique body of knowledge and thus the boundaries of knowledge for thought and practice in a field (Chalofsky, 1998; Passmore, 1997).

A last term crucial for clarification is that of *research*. The terms of research and theory go hand-in-hand in the theory building literature and warrant distinction. For purposes of this discussion, research will be taken to mean *"scholarly or scientific investigation or inquiry; close and careful study"* (Swanson, 1997, p. 10). As Swanson (1988) pointed out, the product of research is new knowledge, but the process of research may or may not be one of theory building. Thus, research can result in new knowledge in the form of theory, but theory is only one form of new knowledge produced by research. Other forms, for instance, include problem solving methods to improve practice and the discovery of new organizational, social and human phenomena.

Having clarified some key terms pertaining to this discussion, it is appropriate to turn to the question of the importance of theory building in an applied field (i.e., a field concerned with application). HRD is one such field.

The Importance of Theory Building in HRD

Theory building is important to the HRD profession for a number of reasons. A discussion of each of these points of importance follows.

To Advance Professionalism and Maturity in HRD. Good HRD theory is practical because it advances the development of knowledge in HRD, guides research towards critical questions in HRD, and enlightens the worth of HRD (Van de Ven, 1989). Many scholars in the field believe that the development of good theory in HRD is essential for the maturation and professionalization of HRD (Chalofsky, 1998; Hatcher, 1999; Marsick, 1990; 1998; Mott, 1998; Swanson & Holton, 1997; Torraco, 1997).

In explicit support of the above, Torraco (1997) drew our attention to a number of roles that are played by theory and, by association, theory building (for example, interpreting new data, and defining boundaries). Each of these roles is important in guiding HRD research and practice and in advancing the HRD profession as a whole, an emphasis that is supported by Bacharach (1989), Dubin (1976) and Van de Ven (1989).

Because HRD is a relatively young profession, the issue of theory building has only recently received attention and emphasis by HRD scholars (Marsick, 1990). At the heart of the attention to theory building in HRD is the drive for more rigorous HRD research and theory. This is fueled by an increasing concern over building evidence of atheoretical practice or "practice that occur without the guidance of theory" (Swanson, 1997, p. 4), as well as ascientific theory in HRD, or theory building and research that occurs without the guidance of scientific discipline or rigor (Chalofsky, 1998; Dubin, 1976; Passmore, 1990; Swanson & Holton, 1997). It is, however, generally recognized in the literature that the development of good HRD theory and theory building methods are essential for advancing maturity, credibility and professionalism of both thought and practice in HRD.

To Dissolve the Tension between HRD Research and Practice. Because HRD is of an applied nature there is a tension between HRD researchers and practitioners. As a result of this tension, the output of knowledge in HRD is judged primarily by its usefulness in practice, a judgement that is generally executed by HRD practitioners. On the other hand, the standards of research and theory (and theory building) in HRD seem to fall more under the charter of the HRD researcher, who is judged more by rigor than relevance (Marsick, 1990). This has resulted in an increasing tension and dilemma between research and practice, between the HRD researcher and the HRD practitioner – a tension further typified by what Van de Ven (1989) described as validity versus usefulness.

Numerous scholars in the field have expressed the need for a closer partnering between researchers and practitioners in HRD. This call for researcher-practitioner partnering is perceived as a way to step up to the challenges of professionalizing and maturing the HRD field and to get HRD practitioners more involved in and committed to contributing their practical knowledge and experience to the recognized knowledge base of HRD. Researcher-practitioner partnering is also perceived as a way to get HRD researchers to ensure that the output of their theories and research is more directly applicable to effectiveness in the field. This partnering ensures that HRD research and theory are useful to HRD practice.

To Develop Multiple, Inclusive Methods of Research for Theory Building and Practice in HRD. A common complaint by HRD practitioners is the inaccessibility to the results of research. HRD research is criticized by practitioners for being not understandable and/or published in inaccessible journals and periodicals (Chalofsky, 1998). What's more, according to the reportedly dominant positivistic paradigm of research in HRD (Hardy, 1999; Marsick, 1990; Mott, 1998; Passmore, 1990; Swanson, 1997; Torraco, 1997), research and the production of knowledge are perceived to be reserved for the scholar with an underlying assumption that it cannot be done well by the practitioner. There are, however, some solutions to this apparent false assumption.

Other authors of theory building in an applied field (for example, Bacharach, 1989; Gioia & Pitre, 1990; Van de Ven, 1989) have indicated that theory can be built from multiple perspectives, paradigms or worldviews of knowledge. According to these authors, when theory is perceived and built from multiple research perspectives, the results are a more comprehensive, inclusive and complete view of human/social and organizational phenomena. A multi-paradigm view of knowledge production is more conducive to assumptions of alternative research paradigms, to the multifaceted nature of human and organizational realities, and to the constantly transforming contexts of human and organizational reality (Gioia & Pitre, 1990).

It has also been suggested that theory can be developed from multiple domains of HRD. Swanson (1997) proposed a Research-Practice-Development-Theory Cycle that shows how theory can flow from research, development and practice. This Cycle is of both an epistemological (nature of knowledge) and ontological (nature of reality) nature and encourages HRD to entertain multiple paradigms/perspectives of building knowledge and theory in HRD. Given the reported dominance of a positivistic research paradigm in HRD (Chalofsky, 1998; Marsick, 1990; Mott, 1998; Torraco, 1997), the absence of clear definitions of theory, and the lack of multi-paradigm methods of theory building, it is not surprising that it is currently difficult to integrate knowledge that comes from HRD development and practice with that from HRD research. Like Swanson, Gioia & Pitre (1990), Hansen (1998), Hardy (1999), Marsick (1990), Mott (1998), and Torraco (1997) have also made compelling arguments for the use of alternative, inclusive paradigms in HRD research and theory building.

So far general consideration has been given to the issue of theory building in HRD. It would next seem appropriate to consider, from the related and available literature, what we do and do not appear to currently know about theory building in HRD.

A Synthesis and Discussion of the Literature: Core Knowns and Unknowns about Theory Building in HRD

This section provides a synthesis of the core knowns and unknowns in HRD theory building knowledge together with some implications for the job of theory building and theory building research in HRD. Being clear about what is known about theory building can help HRD professionals to bound the existing body of theory building knowledge, as well as to identify areas of future research and inquiry needed to develop this expertise and body of knowledge.

Core Knowns about Theory Building in HRD

From available and related literature it is evident that there are a number of things that are known about theory building in applied fields, like HRD.

1. What everyone calls *theory* is not necessarily theory. It is clear from the literature that there are as many definitions of theory as there are authors on the topic. A comparative analysis of definitions of the concept of theory, conducted by Thomas (1997), pointed to a definite lack of consensus on the meaning of the word. This lack of clarity on the meaning of theory is problematic in that it fuels confusion, disagreement and disconnect between HRD researchers and practitioners on what makes for theoretically sound HRD thought and practice.

2. Without exception, authors in this area agree that theory and theory building are very important in guiding the practice of HRD and in advancing the HRD profession as a whole (Bacharach, 1989; Chalofsky, 1998; Dubin, 1976; Gioia & Pitre, 1990; Hardy, 1999; Hatcher, 1999; Marsick, 1990; Mott, 1998; Passmore, 1997; Ruona & Lynham, 1999; Swanson & Holton, 1997; Torraco, 1997; Van de Ven, 1989).

3. There are a number of different opinions and beliefs among HRD scholars about the most appropriate methods for theory building in HRD (Hansen, 1998; Marsick, 1990; Mott, 1998; Torraco, 1997). In spite of these differences in opinion, HRD scholars writing on the issue have demonstrated an open encouragement of using multiple, inclusive methods for research and theory building in HRD. They appear to see this as a positive rather than a negative move in the field, calling into question the future dominance of a positivistic paradigm for research in HRD.

4. The relevant literature reveals that there are different paradigms for building theory in a field, and that these paradigms rest on different ontological and epistemological assumptions regarding the nature of phenomena and the output and purpose of knowledge in a field (Burrell & Morgan, 1979; Gioia & Pitre, 1990). In other words, decisions of theory building research and methods are guided by deeply held, philosophically-laden assumptions about the nature of reality, phenomena and knowledge (Chalofsky, 1998; Gioia & Pitre, 1990; Marsick, 1990; Ruona & Lynham, 1999).

5. From the literature, and particularly from the insights offered by Torraco (1997), it is clear that other than for the hypothetico-deductive method of theory building (offered by Hearn, 1958; Dubin, 1976; Reynolds, 1971; and Cohen, 1991), there is a substantial lack of explicit theory building methods for use in HRD. While Eisenhardt (1989) and Stake (1994) proposed methods of theory building from case studies, Glaser & Strauss (1967) and Strauss & Corbin (1990) argued for grounded theory, Van Manen (1990) for interpretive theory, and Marsick (1990) and Mott (1998) for action learning theory, the actual theory building processes they use and propose are difficult for the HRD researcher to access and replicate, let alone for the HRD practitioner to utilize and therefore contribute back to the HRD body of knowledge.

6. It is also known that theory building in an applied field causes tension between the HRD researcher and the HRD practitioner (Dubin, 1978). This tension is further aggravated by the building evidence of both atheoretical practice and ascientific research that has characterized the HRD field over the past few years. Both Chalofsky (1998) and Dubin (1978) informed us that it takes between five and ten years from the time a theoretical model becomes credible and validated to its utilization by HRD practitioners. This time lag results in day-to-day HRD practice being informed and driven by ideas and opinions cloaked as new theories, rather than by emerging research and theory building (Chalofsky, 1998).

7. The literature indicates that theory and theory building play a number of pertinent roles in guiding research and practice, and in advancing the HRD profession as a whole (Torraco, 1997). As advancement of the HRD profession is desirable to both HRD researchers and practitioners, attention to the issues and roles of good theory and theory building would seem pertinent to the field.

8. The focus of theory and theory building in an applied field is to be informed, guided and judged by practice (Argyris & Schon, 1974; Dewey, 1933; Dubin, 1978; Jacobs, 1997, 1999; Lewin, 1951). Although this applied focus does not mean that the utility of HRD theory is to be judged solely by HRD practitioners, the emphasis on practice and application of HRD theory demands a working relationship and partnership between HRD researchers and practitioners.

The above points provide a synthesis of what appears to be known about theory building in HRD. It is important to consider some of the voids, or unknowns, in the knowledge of theory building in HRD.

Some Voids in the Knowledge of Theory Building in HRD

Because theory building has only recently come to the forefront among HRD scholars, there are a number of voids in this body of knowledge. Three compelling voids concerning our knowledge of theory building in HRD warrant specific attention. A brief discussion of each follows.

1. The lack of a philosophical framework to guide theory and practice in HRD. Marsick (1990), Mott (1998) and Chalofsky (1998), three thought provoking authors on theory building research in HRD, pointed to the need for clarity around the assumptions that underlie the paradigms used to identify, refine, research and solve problems in HRD. None of them, however, provides clarification for addressing this difficult task, and their conversations appear stuck at a research methods level and in methodological dilemmas of relevance versus rigor, or validity versus utility (Ruona & Lynham, 1999). Gradous (1989) lent us the wisdom of jumping to a larger frame of the system-in-focus to dissolve this methodological dilemma (supported by Gioia & Pitre, 1990). It would be prudent, therefore, to step up the dialogue to include the challenge of clarifying and agreeing on the philosophical underpinnings needed to guide the thought and practice of HRD. In debating methods of research and practice in HRD, we are simultaneously compelled to grapple with the notion of what makes for sound knowledge in HRD. This multi-dimensional dialogue is certainly necessary if HRD is to rise to the task and challenge of rigorous *and* relevant theory building.

2. The absence of well researched, tested, and explicit theory building methodologies. Methods of theory building that enable us to develop theory from multiple research paradigms are not readily available to HRD professionals (instead they seem to be embedded in research areas outside of mainstream HRD). As a result, more rigorous inquiry into the nature of theory building methodologies for use in HRD is required. Theory building methodologies that build and foster the necessary partnering between researchers and practitioners to ensure useful HRD theory are needed. Clearly the literature in the field of organizational theory offers some rich insights and learning for HRD in this regard. However, until these theory building research methodologies are tried, tested, and made available to HRD researchers and practitioners, it is unlikely that rigorous, valid or useful theories will be developed to guide and inform HRD professionals.

3. The lack of shared and common understanding of the core concepts of *theory and theory building*, and an absence of corresponding standards by which to guide and judge good theory. A common, shared understanding of these core concepts is a necessary condition for establishing what makes for good theory and theory building research methods in HRD.

From both the general introduction to theory building and theory building research in HRD, as well as the synthesis and discussion of available literature, it is evident that a number of changes in the conceptualization and practice of the HRD profession are needed. However, in order to make these necessary changes, the profession will need to step up to some key challenges related to applied theory building.

Two Key Challenges of Theory Building in an Applied Field/Profession

Challenge One: Dealing with the Researcher-Practitioner Relationship

The phrase *there is nothing more practical than a good theory* was coined by Lewin in 1933 and epitomizes the nature of theory building in an applied field. The concern for application, according to Dubin (1976), changes the emphasis among the various aspects of theory building. He stressed that a particular concern in building applied theory is that of the practitioners who expect to use the theory and who usually play a crucial role in defining the content of the theoretical model to be developed. Dubin clearly suggested that research and theorizing in an applied context is done with the explicit intent that the results affect and improve conditions in the field.

The ultimate judge of *good theory* in an applied field is primarily through practice. This adjudicating role of praxis demands that the researcher develop a deep understanding of the recursive nature of inductive and deductive processes in theory building (to ensure optimum connectivity between abstractions and the real world). It also demands that the researcher partner closely with the practitioner in terms of how the problem gets defined and how the empirical indicators used to test the theory are defined and selected. This praxis emphasis also requires that the practitioner be patient with the researcher/theorist in the theory building process. If the researcher is not able or permitted to build theory through the application of required and rigorous process, then the outcome of the theory is unlikely to meet the demands of relevance common among the practitioner.

In an applied field it is important to bear in mind that the practitioner needs to be afforded the responsibility of exerting constant pressure on the theorist for the purpose of ensuring that HRD theory meets the test of HRD application. "For when it does we have a fruitful interplay between practitioner and theorist" (Dubin, 1976, p. 39).

Challenge Two: Recognizing the Value of Multiple Theory Building Research Paradigms

Although there are a limited number of scholars in the area of applied theory building it is clear from the literature that theory building can be conducted from multiple research perspectives. To date, however, most of the theory building methodologies/approaches made explicit by HRD and business and education professionals tend to be of a positivistic nature (Chalofsky, 1996; Gioia & Pitre 1990; Hardy, 1999; Marsick, 1990; Mott, 1998; Shindell, 1999; Torraco, 1997; Van de Ven, 1989). Gioia and Pitre (1990) reported that commonly known theory building approaches are not entirely consistent with the assumptions of alternative research paradigms now assuming prominence in organizational and social studies. They further argued that the use of any one single research paradigm promotes too narrow a view to reflect the multi-faceted nature of organizational and human reality.

Burrell and Morgan (1979) offered a useful matrix of four different research paradigms, namely, that of the functionalist, the interpretivist, the radical humanist, and the radical structuralist. To put this matrix into a more commonly understood research framework, the functionalist paradigm corresponds with what Hultgren and Coomer (1989) described as positivistic/analytical research, the interpretivist paradigm with their description of interpretive research, and the radical humanist and radical structuralist paradigms with what they described as critical research. Adapted from the original schematic offered by Gioia and Pitre (1990), Table 1 offers a comparative clarification of some of the theory building paradigm concepts they presented and adds some general and HRD-related examples and references to these theory building paradigms.

Table 1. Four Key Research Paradigms Affecting Theory Building

Theory Building Concepts	Regulation Research Paradigms		Radical Change Research Paradigms	
	1. Functionalist	2. Interpretivist	3. Radical Humanist	4. Radical Structuralist
Research Goal	To search for regularities and test so as to predict and control.	To describe and explain so as to diagnose and understand.	To describe and critique so as to change (achieve freedom through revision of consciousness).	To identify sources of domination so as to persuade and guide revolutionary practices (achieve freedom through revision of structures).
Theory-Research Intent	• Relationships • Causation • Generalization	• Social construction of reality • Reification process • Interpretation	• Social construction of reality distortion • Interests served.	• Domination • Alienation • Macro forces • Emancipation
Theory Building Approaches	• Refinement through causal analysis • Example: Hypothetico-deductive and Applied or particularized theory	• Discovery through code analysis • Example • Action and Feminist theory	• Disclosure through critical analysis • Example: • Historical and Critical theory	• Liberation through structural analysis • Example: • Marxist, Critical and Feminist theory
Theory Building Goals	• To write up results – to show how the theory is refined, supported, or disconfirmed: to show what it tells the scientific community and the practitioners	• To write up a substantive theory – to show how it all fits together	• To write up a dialectic analysis – to show how the level of consciousness should change	• To write up a rhetorical analysis – to show how the praxis should change
HRD-Related Example	• Cause-and-effect theories of purposive behavior (e.g. motivational theory).	• Constructive theories of communication and learning (e.g. cognition and learning theories)	• Dialectic theories of critical change (e.g. critical research and change theory)	• Liberation or emancipatory theories of structural change (e.g. action research and systems theory)
HRD-Related Theory Building Reference Examples	• Herzberg (1959,1966) • Dubin (1976,1978)	• Knowles, Holton & Swanson (1998) • Argyris & Schon (1996)	• Lewin (1951) • Mezirow (1981)	• Von Bertalanffy (1968) • Katz & Kahn (1978)

Assumptions of the dominant functionalist (or positivistic) paradigm become problematic when dealing with subjective views of social and organizational phenomena (Eisenhardt, 1989; Gioia and Pitre, 1990). The need

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to accommodate the subjective nature of social and organizational phenomena is resulting in an increasing call from HRD scholars to question the general appropriateness of the dominance of the objective science research paradigm (Chalofsky, 1998; Lincoln, 1985; Marsick 1990; Mott, 1998; Thomas, 1997; Torraco, 1997; Van de Ven, 1989). There is, consequently, a paradoxical push towards paradigm-based theory building and a corresponding definition of theory that can entertain multiple research paradigms. As a result, theory building is becoming more about the search for comprehensiveness stemming from different worldviews than about the search for truth (Eisenhardt, 1989).

The push to study and understand organizational and human/social phenomena demands that the assumptions of multiple research paradigms be accepted and embraced in the process of developing the HRD body of knowledge. This, in turn, will enable multi-paradigm and inclusive research approaches to theory building in HRD, an approach to knowledge generation and building that is more likely to facilitate partnering between the HRD researcher and practitioner . Gioia and Pitre (1990) further pointed out that multi-paradigm approaches to theory building can not only generate a more complete body of knowledge, but that they imply a broadening of the concept of theory and of the theory building process itself. Both of these points are of worthy note for theory building in HRD.

Important Next Steps for the HRD Profession

This article has presented an in-depth analysis of the common knowledge of theory building in HRD. It has also highlighted the importance of theory building in the maturing of the profession together with two important challenges of theory building in an applied field like HRD. Given the focus and outcome of this inquiry, important next steps for the HRD profession need to be highlighted if HRD is to rise to the job of theory building research and development.

First, there is a need to recognize that sound theory and theory development is important to the maturity of HRD thought and practice. Second, there is a need to commit to conversations to agree to and clarify inclusive, multiple theory building research paradigms at a philosophical (ontological and epistemological) rather than just a methods level. Third, there is a need to conduct rigorous and relevant research to develop, and make explicit and available, multiple methods and paradigms of theory building to the HRD researcher and practitioner. Fourth, there is a need to begin to support theory building related efforts and studies in HRD. Although some of these studies may currently seem incomplete and perhaps more conceptual than operational, these pioneering steps of discovery and understanding need to be encouraged, supported and made explicit in the HRD body of knowledge. And fifth, there is a need to participate in symposia and forums to synthesize knowledge and efforts on theory building in HRD. One example may be regular Academy of HRD conference symposia on theory building. Others may include periodic inclusion of a special theory building forum section in key HRD journals and possibly a complete journal dedicated to building this body of knowledge in HRD.

Just stepping up to these few requirements will help to develop more good *and* useful HRD theory. Meeting these requirements will, in turn, help to make for more professional and mature thought and practice in HRD.

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Symposium paper 45-1

The Components of Emotional Intelligence and the Relationship to Sales Performance

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This paper reviews a model of emotional intelligence that emphasizes the components of Perception, Assimilation, Understanding and Managing of emotion. The purpose of the present study is to examine the relationship between the components of emotional intelligence and individual work performance in a sales environment. A research methodology and literature review will be presented.

Keywords: Emotions, Intelligence and Performance

Introduction and Overview

Following Goleman's (1995) research on emotional intelligence, the topic has received considerable attention in popular business literature. In addition to recent newspaper and magazine articles, several books have been written on emotional intelligence in the business world. (Cooper 1997; Segal 1997; Steiner 1997; Weisinger 1998). Despite the growing literature lauding the benefits of emotional intelligence, there is little empirical evidence to support that a high degree of the components of emotional intelligence in individuals results in a high level of work performance. The purposed research seeks to fill that void.

The other construct that will be explored is that of sales performance [Weitz, 1986]. There is extensive research correlating a wide variety of topics with sales performance: Time Management, Achievement Striving and Cars Sales Performance (Barling 1996); Achievement Striving and Sales Performance (Bluen 1990); Instrumental and Expressive Personality Traits and Sales Performance (Comer 1997); Reward Structure, Extraversion and Sales Performance (Stewart 1996); Sales Force Performance and Satisfaction [Bagozzi, 1978 75]; Moral Judgment and Job Performance (Schwepker 1996). However, after a thorough literature review it was found that the components of emotional intelligence listed above have not been studied in relationship to sales performance. This study will fill that void as well and will focus on the sales theory of adaptive selling (Weitz 1990) albeit, the intent of the present research is to obtain a better understanding of emotional intelligence and high performers. Therefore, this study could focus on doctors and the relationship with patients or teachers and feedback from students, however, I have chosen to study emotional intelligence through sales people.

The objective of the purposed research is to provide a framework for research directed toward increasing the understanding of the components of emotional intelligence in a sales environment. The framework centers on the specific components of emotional intelligence and their relationship to performance in sales. Though emotional intelligence may be only one element of success in sales, it indicates the degree to which salespeople are able to take advantage of the unique communication of elements associated with personal selling (Sullivan 1995). Personal selling is the only communication vehicle in which the marketing message can be adapted to the specific customer's needs and beliefs (Sujan 1978). Salespeople have the opportunity to do "market research" on each customer and implement a sales presentation that is maximally effective for that customer. In addition, they can observe the reactions of their customers to sales messages and make rapid adjustments (Weitz 1978). "The practice of adaptive selling is defined as the altering of sales behaviors during a customer interaction or across customer interactions based on perceived information about the nature of the selling situation" (Weitz 1986).

After defining emotional intelligence, a discussion of the antecedents and consequences will be presented. Then a proposed research methodology will be presented. Emotional intelligence (Salovey 1990) has been defined as: knowing one's emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships. The definition of emotional intelligence has more recently been refined "Emotional Intelligence refers to an ability to recognize the meanings of emotions and their relationships, and to reason and problem-solve on the basis of them" (Mayer, 2000).

It is proposed that salespeople may exhibit a high level of these emotional intelligence attributes when they use different sales approaches across sales encounters and when they make adjustments in their behavior during the encounters. In contrast, it is proposed that a low level of emotional intelligence is indicated by the use of the same sales approach in and during all sales encounters.

Emotion is defined as a mental state of readiness that arises from cognitive appraisal of events or thoughts; has a phenomenological tone; is accompanied by physiological processes; is often expressed physically (e.g., in gestures, posture, facial features); and may result in specific actions to affirm or cope with the emotion, depending on its nature and meaning for the person having it [Bagozzi, 1999]. Emotions (Mayer, 2000) are "internal events that coordinate many psychological subsystems including physiological responses, cognitions, and conscious awareness."

At the individual level, Salovey and Mayer [1990] state that emotional intelligence is the "subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". An emotionally intelligent individual is able to recognize and use his or her own and others' emotional states to solve problems and regulate behavior.

Problem Statement

The success of a sales organization is highly dependent on the performance of its salesforce [Cravens, 1993]. Prescriptions for salesforce improvement generally fall into two categories (Stewart 1996). The first category encompasses efforts to hire people who possess personality traits congruent with sales behavior. The second category includes endeavors to develop control systems (e.g. evaluation, training, and compensation practices) that facilitate sales. Although both approaches have been linked to performance improvement (Churchill 1985), no empirical research has been done to integrate the theory of emotional intelligence with salesforce control systems. The current study will provide a basis to begin further integration.

Most research on selling has largely ignored the emotional aspects of personal selling. In comparison to information processing and behavioral decision research, little is known about the role of emotions in marketing behavior. Much of what is known is confined to consumer behavior, as opposed to the behavior of salespeople or managers (Bagozzi 1999).

Rather than considering the role of emotions, empirical research has sought to uncover sales behaviors that are effective over a wide range of selling situations. The equivocal and even contradictory nature of the findings suggests that there are no universally effective selling behaviors (Weitz 1979). "Every contact a salesman has involves a different human problem or situation and no one way to sell" (Thompson 1973). Thus, effective salespeople need to use a contingency approach to match the specific situations they encounter (Weitz 1978). In order to be able to adapt to specific customers and situations a high level of the components of emotional intelligence may prove useful. The relationship between the components of emotional intelligence and performance in sales is the intent of this dissertation.

Although empirical research in personal selling has not directly investigated emotional intelligence, there is some evidence that salespeople do adjust their sales approaches to fit perceptions of customers and that such adjustments improve performance. A field experiment (Wise 1974) demonstrated that automobile salespeople varied the price quoted and treatment offered on the basis of customers' sex and race. Another study (Spiro 1979) found relationships between influence tactics used by salespeople during a sales interaction and characteristics of the interaction. The consistency of these findings suggests the best salespeople use different approaches in different situations. In order to identify the proper approach for the situation, it is proposed that emotional intelligence may be an important factor. Weitz (1978) found the performance of salespeople to be related to their knowledge of customer values and beliefs. Aspects of emotional intelligence include a capability to distinguish the meanings of emotions and their relationships, and to reason and problem-solve on the basis of them. This helps in perceiving the customers' emotions, understanding the information of those emotions, and managing them.

Perceiving, assimilating, understanding and managing emotions allows salespeople an opportunity to develop and implement a sales presentation tailored to each customer. In addition, "salespeople can make rapid adjustments in the message in response to their customers' reactions" (Weitz 1990). Empirical research has mostly disregarded the unique emotional aspects of personal selling. Rather than focusing on the antecedents and consequences of emotional intelligence, sales research has been directed toward uncovering universally effective sales behaviors and behavioral predispositions. This research has been largely unsuccessful in uncovering sales behaviors that are effective over a wide range of selling behaviors (Weitz 1979).

Purpose

The objective of the proposed research is to identify if there is a correlation between the components of emotional intelligence and success as an automotive sales person. More specifically the degree to which each individual component contributes to an increase in sales will be identified. For the purposes of this paper, success is considered being in the top quartile of sales performance within a single store. The study will describe and examine emotional intelligence in the context of an automotive sales environment. Additionally, the factors that contribute to high performance in sales, specifically adaptive selling will be discussed. Finally, this research will further add to the body of existing research work that has been done with the test instrument, the intent is not to validate the psychometrics of the instrument as that has already been achieved.

Significance

If a correlation exists between high levels of the components of emotional intelligence and high performance in sales, several actions could be taken. EQ levels can change and aren't fixed like IQ or personality traits (BarOn 1988). Therefore if sales guides are identified as having low emotional intelligence, training on respective topics may help raise their emotional intelligence and hence improve their sales.

This information is important for researchers, corporate human resource managers and sales managers. This information could change the way they view the sales experience and the consumer. More importantly this research will add to the body of knowledge.

which will support or debunk the theory of emotional intelligence and the relationship to high performance. The present research will also add to the body of knowledge in sales research and adaptive selling.

Hypothesis:

H_0	A high relationship between the individual components of emotional intelligence (perception, assimilating, understanding and managing of emotion) does not result in high sales performance.
H_A	A high relationship between the individual components of emotional intelligence (perception, assimilating, understanding and managing of emotion) does result in high sales performance.

Research Design

A stratified random sample of Sales Guides from seventeen automotive retail stores will be tested, (approximately one-third of the Sales Guides from each store.) The stores are retailers of new cars. Each store employs a different number of Sales Guides depending on the stores size and volume. The testing will take place on-site at each of the stores and will be voluntary for the Sales Guides. The stores selected are located in Denver, Colorado. There are two hundred and seventy-five total stores located across the nation that are company owed. However only these seventeen stores have common sales processes, policies and procedures. Therefore they were selected to help eliminate any outside variables that might effect sales performance. Sales Guides will include the following demographic groups: Male, Female, Caucasian, African American, Asian, and Hispanic.

The test instrument selected is the Multifactor Emotional Intelligence Scale (MEIS) which is an ability test designed to measure these four branches of the emotional intelligence ability model of Mayer and Salovey (1997):

Identifying Emotions - the ability to recognize how you and those around you are feeling.
Using Emotions - the ability to generate emotion, and then reason with this emotion.
Understanding Emotions - the ability to understand complex emotions and emotional "chains", how emotions transition from one stage to another.
Managing Emotions - the ability which allows you to manage emotions in your self and in others.

The MEIS is a paper and pencil ability test of emotional intelligence. It measures 4 branches of emotional intelligence as defined by Mayer & Salovey (1997) and provides a total emotional intelligence score as well. It is designed for ages 17 years and older (norms on 500 adults) there is also a version available for ages 12 to 16 (norms on 229 subjects).

There are 11 independent sub-tests for the adult version and testing time is about 1 hour 10 minutes for all 12-sub-tests. All the subtests will be used in the present research. The test will be scored by entering data into SPSS (400+ variables for the full test).

Research Design and Methodology

Research Type :	Field Experiment
Independent Variable:	Emotional Intelligence
Dependent Variable:	Sales Performance
Groups:	Sales Guides

Sales Guides	MEIS	
G1 n=35	x1	0 1
G2 n=35	x2	0 2
G3 n=35	x3	0 3

Procedure

Participants will be given a testing booklet and answer sheet with instructions for completion. They will be given up to two hours to complete and return the testing booklet and answer sheet. Approximately one-third of the Sales Guides in each store will be selected for the study. The Sales Guides will be told that they will receive confidential feedback on their test results.

Results

The individual test results will be correlated with the individual performance of each of the Sales Guides. The individual performance will be the average number of cars sold over the previous six months. The six-month average will compensate for extraneous variables such as a change in policy, managers or special advertising.

Confidentiality

The researcher has agreed that the MEIS will be used for research purposes only and not for commercial gain. The MEIS, and all derivatives thereof, is and shall remain the exclusive property of Multi-Health Systems (MHS); MHS shall own all right, title and interest, including, without limitation, the copyright, in and to the MEIS. The MEIS will not be modified or works created that are derivative of the MEIS. The researcher will provide MHS with a copy of any research findings arising out of the use of the MEIS and will cite Mayer, Caruso and Salovey in any of my publications relating thereto.

Individual results will be kept confidential and will not be shared with the employer or any manager of the sponsoring organization. Aggregate results however, will be shared with the organization for the purposes of creating training, development and selection tools. Individual results will be shared with the sales guides in a one-on-one feedback session with the researcher. This will be down within a six-month timed frame after the results have been completed.

Literature Review

There are two general approaches to the study of emotional intelligence. First, there is a broad model approach, an socio-emotional approach that includes abilities as well as a series of personality traits. The popular work of Goleman fits into this area. To some extent, the initial Salovey and Mayer (1990) model also is an socio-emotional, or mixed, model. In fact, an early measure of emotional intelligence, the Trait Meta-Mood Scale, is a self-report measure of emotional clarity, mood repair and attention. The second type of model of emotional intelligence is an ability model.

The theory of emotional intelligence is not new. Over the years even the most ardent theorists of IQ have tried to bring emotions within the domain of intelligence. Salovey has mapped in great detail the ways in which we can bring intelligence to our emotions (Salovey 1990). When Robert Sternberg asked people to describe an "intelligent person," practical people skills were one of the traits listed (Sternberg 1985). Research by Sternberg led him to E.L. Thorndike's conclusion: that social intelligence is both distinct from academic abilities and a key part of what makes people do well in the practicalities of life. Thorndike divided intelligent activity into three types: social intelligence, concrete intelligence, and abstract intelligence [Thorndike, 1904].

Emotional Intelligence

In recent year's psychologists (Sternberg 1985; Salovey 1990) among them, have taken a wider view of intelligence, trying to reinvent it in terms of "what it takes to be successful in life." Although Thorndike first wrote of the concept of emotional intelligence, it was largely ignored until Salovey and Mayer revived it. Salovey subsumed Gardner's personal intelligences in his five domains of emotional abilities (Salovey 1990):

1. Knowing one's emotions 2. Managing emotions 3. Motivation 4. Recognizing emotions in others 5. Handling relationships

Emotional Intelligence was popularized by [Goleman, 1995] and since 1995 there has been a growing interest in the theory [Farnham, 1996 #9; Segal, 1997 #20; Steiner, 1997 #22; Weisinger, 1998 #23; Cooper, 1997 #21; Blackburn, 1996 #12]. Goleman, who is a psychologist and science writer for the New York Times caught the attention of the entire nation with his book in 1995. He suggests a type of social intelligence, based on neuroscience and psychological theories, which includes rational and emotional intelligence. Goleman's opinions are comparable to Gardner's as far as interpersonal and intrapersonal intelligences are concerned.

The theory of Emotional Intelligence has often been conceptualized (particularly in popular literature) as involving much more than the ability at perceiving, assimilating, understanding, and managing emotions (Mayer 2000). These conceptions include not only emotion and intelligence per se, but also motivation, non-ability dispositions and traits, and global personal and social functioning (Goleman 1995; Bar-On 1997). Widening the theory of Emotional Intelligence seems to undermine the utility of the terms under consideration. These have been called *mixed* conceptions because they combine so many diverse ideas. An example is the Bar-On Emotional Quotient Inventory (EQi) that includes 15 self-report scales that measure a person's self-regard, independence, problem solving, reality testing, and other attributes (Bar-On 1997). Such qualities as problem-solving and reality testing seem closely related to ego strength or social competence than to emotional intelligence. Mixed models must be analyzed carefully so as to distinguish the concepts that are a part of emotional intelligence from the concepts that are mixed in, or confounded, with it (Mayer 2000).

Using almost identical components, Emotional Intelligence is similar to the theory of social intelligence. The terms used to describe the two include, the ability to accurately perceive one's own emotions and that of others; to master one's own emotions and respond appropriately in various life situations; and to enter into relationships where honest expression of emotions is balanced against courtesy, consideration, and respect. Social Intelligence as defined by Thorndike (1920) is the ability to perceive one's own and others' internal states, motives, and behaviors, and to respond to them optimally on the basis of that information.

Emotional intelligence involves the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth [Goleman, 1995][Salovey, 1990][Mayer, 1996][Mayer, 1993][Mayer, 1997]. This definition, affirm Mayer & Salovey (1997) connects intelligence and emotion because it combines the ideas that emotion makes thinking more intelligent and that one thinks intelligently about emotions.

A model of emotional intelligence should, based on recent research (Mayer 2000), link emotions with reasoning. Non-ability, or mixed, models do not describe emotional intelligence, but are instead, compendiums of positive, pro-social behaviors and personality traits (e.g., (Goleman 1995; Bar-On 1997)). This is more than just an issue of semantics. In some models, skills are confused with outcomes, and personality traits with abilities. These models may be of value; however, there may be little that is unique about these models that is not already accounted for by existing personality theories and measures. A cursory analysis of the 25 traits proposed by Goleman indicates that there is overlap, for instance with the five-factor model of personality and especially, the measurement of these five factors (Mayer 2000). This is, in essence, what Davies et al (1998 #175) concluded.

An ability model of emotional intelligence, such as the one developed by Mayer and Salovey (1997), views emotional intelligence as a set of skills that combine emotions and cognition. They defined emotional intelligence as the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Mayer & Salovey, 1997). Specifically, emotional intelligence (Mayer 2000) is viewed as consisting of four separate components: Identifying Emotions (the ability to recognize how you and those around you are feeling); Using Emotions (the ability to generate emotion, and then reason with this emotion); Understanding Emotions (the ability to understand complex emotions and emotional "chains", how emotions transition from one stage to another); and, Managing Emotions (the ability which allows you to manage emotions in your self and in others).

Emotional intelligence and IQ

Comparisons of two theoretical pure types (Block 1995): people high in IQ versus people high in emotional aptitudes show that IQ and emotional intelligence are not opposing competencies, but rather separate ones. The high-IQ pure type is almost a caricature of the intellectual, adept in the realm of mind but inept in the personal world.

Intelligence quotient (IQ) makes up only 15 to 20 percent of what distinguishes star performers from others, but the most successful employee has mastery over soft skills (Brotherton 1998). "IQ is just the entry point, what's more important is emotional intelligence" (Goleman 1995). Goleman in his book "Emotional Intelligence" cited a study at Bell Laboratories that looked at employees with very high IQs and similar educational backgrounds. The outstanding performers were those who excelled in getting along with colleagues, listening and other interpersonal skills. These skills says Goleman, are "increasingly important for success." Companies that develop these skills will thrive in a competitive environment.

In a longitudinal study of Harvard graduates, [Ekman, 1992] reported that I.Q. does not explain the different life adjustments made by people in his sample. The "brightest" men in college were not necessarily the most successful. The criteria for success were salary, status in their fields, and achievements. The high achievers in college were also deemed to be less satisfied and less happy. This is the crux of the theory of emotional intelligence, that high intelligence and academic success do not necessarily coincide with emotional acumen and can result in a less satisfactory life adjustment. Intelligence, per se, has little to do with emotional intelligence or success in life [Goleman, 1995].

However, the equivocal nature of emotional intelligence may be demonstrated through consideration of two rather different research traditions (Davies 1998). First, it would appear that emotionally adept individuals have certain personality traits that are known to share no particular relation with cognitive abilities (Boyle 1995). On the other hand, emotional intelligence appears conceptually at the very least, to show some important convergence with other types of abilities, particularly social and crystallized intelligence (Davies 1998).

Inasmuch as it is generally believed that there is no relationship between intelligence and emotional intelligence, or a zero correlation, thus far few have separated emotional intelligence from general intelligence and other kinds of intelligence (Ekman 1992;

Goleman 1995; Mayer 1997). Nevertheless, it has been suggested that emotional intelligence has the discriminate validity lacking in measures of social and crystallized intelligence (Mayer 1993; Mayer 1997).

Most recently, Mayer and Salovey (1997) have found other definitions of emotional intelligence broad and imprecise, lacking a major component – the thinking component. Emotions should be thought about. Their revised definition [Mayer, 1997] as previously stated accounts for the thinking component and the link to intelligence.

"To have enough freedom, flexibility, range, and reason to work effectively, a person needs both IQ (traditional intellectual quotient) and EI (emotional intelligence)" (Covey 1996). The material on emotional intelligence is something we know intuitively. It underscores the fact that when we look at verbal reasoning capacities (the typical IQ approach) we look at a very small spectrum of human intelligence. "Emotional intelligence comprises the qualities (some call it "character") that allow some people to succeed where others equally or better endowed with native intelligence still fail" (Sullivan 1995). Emotional intelligence could clarify intelligence, if associated with the consequences of intelligent behavior [Mayer, 1996].

Emotional Intelligence Assessment Instruments

Instruments developed for measuring the appraisal and expression of emotion for verbal and non-verbal components (Salovey 1990) are the Beth Israel Psychosomatic Questionnaire, the Schalling-Sifeneos Personality Scales, and the Minnesota Multiphasic Personality Inventory (Selfness, 1991; Klieger, 1980; Apfel, 1979). Among the instruments which measure the nonverbal component of emotion, which can be expressed and appraised (Ekman 1975; Fridlund 1987; Ekman 1991) are the Affect Rating Scale and the Affective Communication Test (Buck 1975; Buck 1977; Freedman 1980).

Appraisal and expression of emotions in others may be nonverbal perception of emotion and empathy, a sort of "body language" appraisal (Salovey 1990). Instruments used for measuring the nonverbal perception of emotion are the Affect Sensitivity Test, the Communication of Affect Receiving Ability Test, and the Profile of Nonverbal Sensitivity (Campbell 1971; Buck 1976; Kagan 1978, September; Rosenthal 1979; Buck 1984). Some of the instruments used for measuring empathy, that have been found to be critical to a person's well being (Kessler 1985; Thoits 1986) are the Emotional Empathic Tendency Scale (Mehrabian 1972), and the Balanced Emotional Empathy Scale (Mehrabian 1996).

Recent tests for measuring emotional intelligence have been self-report instruments (e.g., (Mayer 1994; Salovey 1995)). Self-reports of ability and actual ability are only minimally correlated in the realm of intelligence research (Paulhus 1998). The challenge with self-assessment instruments is that when individuals are asked how accurate they are at reading other people's feelings, there is no correlation between their answers and how well they actually perform on objective tests (Davis 1997). In contrast, when people who know them well rate someone on empathy, there is a very high level of accuracy (Goleman 1998). Goleman claims the idea evaluation relies not on any one source but on multiple perspectives. These may include self-reports as well as peer, boss, and subordinate feedback. One such tool is the Emotional Competence Inventory (ECI), which is a 360-degree tool designed to assess the emotional competencies of individuals and organizations (Boyatzis, 1995; Goleman, 1998; Hay/McBer, 1996).

However, "emotional intelligence can be accessed most directly by asking a person to solve emotional problems" (Mayer 1990; Mayer 1996). Self-concept is important, of course, because people often act on their beliefs about their actual abilities (Bandura 1977). Emotional intelligence as a domain of intelligence, however, is best studied with ability measures (Mayer 2000).

Conclusion

In this study it is suggested that salespeople's emotional intelligence has an important bearing on their performance. The emotional intelligence aspect of people's work is being increasingly recognized as important by organizational researchers. Researchers are taking a broader view of intelligence, trying to put it in terms of being able to live a successful life. This broader view elevates the importance of emotional intelligence.

Psychology has viewed emotions from two different perspectives. First, that emotions and logical reasoning are opposites of each other (Woodworth 1940). This view holds that emotions are the cause of disruptions of mental activities so inferior that they consequently should be calmed and concealed. Accordingly, emotions are unconscious, visceral responses due to a maladjustment that interferes with the rational functioning of the person.

The second perspective is that emotions are an essential element of logical reasoning and of intelligence in general (Leeper 1949). This perspective holds that emotions are organized responses that adaptively trigger cognitive activities and direct actions (Salovey 1990). In this view, emotions are organized responses to an internal or external event, with positive or negative meaning (Salovey 1990).

Salovey and Mayer (1990) defined emotional intelligence as "the subset of social intelligence that involves the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions" (p.189). Social intelligence (Thorndike 1920) essentially supports the same concept, as does personal intelligence (Gardner 1983).

In regard to sales theory, personal selling is inherently a dynamic influence process (Weitz 1979; Weitz 1986; Weitz 1990). Effective salespeople need to alter their sales approaches both within and across sales interactions. However, the conceptual underpinning of most prior research is a static "source-message-receiver" model that does not include the above aspect of personal selling (Capon 1977).

Recent inquiry in sales has followed a dyadic approach. Intrinsic in this approach is the understanding that salespeople must adjust to the specific customer with whom they are interacting. Empirical research based on the dyadic approach has concentrated on static properties of the customer-salesperson dyad such as similarity and relative expertise (Woodside 1974; Busch 1976; Riordan 1977).

Building on the dyadic theme, the contingency approach (Weitz 1981), emphasizing the importance of tailoring sales approaches to specific sales situations and customers. This approach clearly suggests the need for the components of emotional intelligence; self-awareness, self-regulation, motivation, empathy, and social skill. However, the contingency approach like other dyadic research, does not explore how this knowledge is developed and effectively utilized.

This dissertation proposal suggests that the components of emotional intelligence are the critical characteristics that enable salespeople to excel in their roles. The nature of the individual components are described and methods for accessing are presented. Finally the proposed framework suggests methods for developing the Emotional Intelligence components and motivating salespeople to use this information in sales situations. Thus, the conceptual framework presented comprises the factors that enable salespeople to capitalize on the unique opportunity to modify influence endeavors according to the characteristics of each influence situation.

The proposed framework is best viewed as a point of departure for both theory testing and theory building. The discussion suggests testable hypotheses. But it also suggests that more inductive work and field research is needed so that our theories can capture the complexities of emotional intelligence.

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